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ANDERSON COUNTY SOUTH CAROLINA
DEBRIS MANAGEMENT PLAN

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FEMA 9500 Series Policy
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FEMA Public Assistance Guide 322
FEMA Policy Digest 321
FEMA 44Code of Federal Regulations [(CFR) 13.36 dated 5-23-06]
Stafford Act, Sec 403 & 407

Executive Summary

STAFF ROLES AND RESPONSIBILITIES

Does the plan outline the roles and responsibilities of the various functions identified (Public Works, Finance, and Solid Waste Departments, etc.)?

The County of Anderson is responsible for developing a debris management plan, selecting a debris manager, and a debris management staff. The debris management staff will be comprised of personnel representative of the following county departments: County Emergency Management Division, County Transportation Division and the County Solid Waste Division.

The County debris management plan outlines the roles, responsibilities and functions of these various county departments involved in the process of disaster debris recovery, to include; Emergency Management Division, County Transportation Division, the County Solid Waste Division and the financing and purchasing requirements related to disaster recovery as well as informing the public of current disaster situation.

Staff Development Roles & Responsibilities

Does the plan address health and safety procedures in accordance with State/Local health and safety standards/requirements?

Anderson County Council Ordinance number 43 in reference to Emergency Preparedness; Chapter 18 section 18-56 "Appointment, authority, cooperation of county forces; directs that the County Emergency Preparedness Director is designated and appointed as chief executive officer of the county council for the purpose of preparing for and executing all duties and functions specified in all acts of the general assembly relating to civil defense and emergency preparedness. The emergency preparedness director shall have the duty of coordinating overall emergency services for the county during emergency and non-emergency periods and of coordinating the activities planning and preparedness of the county government for the purpose of disasters.

MISSION

Does the plan identify procedures for acquiring required regulatory permits?

The mission for the County of Anderson Debris Management Plan is to provide a unified and coordinated approach by the County Divisions of Transportation, Solid Waste and Emergency Services/Public Safety to facilitate and coordinate the removal, collection, and disposal of debris following a disaster, to mitigate against any potential threat to the health, safety, and welfare of the impacted citizens, and expedite recovery efforts in the impacted area, and address any threat of significant damage to improved public or private property. In so doing Anderson County will comply with all State and federal regulatory safety and health requirements by ensuring strict compliance with SCDHEC licensing and permitting requirements.

ASSUMPTIONS

Does the plan address the basis for planning which include assumptions for various events and forecasting/modeling for debris volumes?

The plan addresses the basis for planning which include assumptions for various events and forecasting/modeling for debris volumes, such as; the assumption that a major natural disaster that requires the removal of debris from public or private lands and water could occur at any time. Also the assumption that The Anderson County Council will declare that a local state of disaster exists and request state and federal assistance. Thereby assuming The Governor of South Carolina will declare a state of emergency that will authorize state resources to assist in the removal and disposal of debris. With The President approving a Presidential Disaster Declaration that will authorize federal resources to assist in removal and disposal of debris. The County Debris Plan further outlines various forecasting models for estimating debris volumes.

Debris Collection Removal Priorities

Does the plan include priorities for the clearance, collection, and disposal of debris?

The County debris plan then prioritizes for the clearance, collection, and disposal of debris. The Anderson County Transportation Department is responsible for the debris removal function, in conjunction with designated support agencies utility companies, waste management firms, and trucking companies, to facilitate the debris clearance, collection, reduction, and disposal needs following a disaster. The County Transportation Department will be responsible for removing debris from the public right-of-way. Only when pre approved and it is deemed in the public interest will County Transportation Department remove debris from private property.

The plan include priorities for the clearance, collection, and disposal of debris removal/collection process must be initiated promptly and conducted in an orderly, effective manner in order to protect public health and safety following a major disaster or catastrophic event. To achieve this objective, the first priority will be the removal/collection of debris from key roads in order to provide access for emergency vehicles and resources into the impacted area. Removal/collection of debris from roadways such as that from State and municipal roadways as well as that of private subdivisions will be the responsibility of that entity, however the County reserves the right in coordination with that entity to remove/collect such roadways debris to allow for emergency vehicle access and for the protection of public health and safety.

The first priority will be removal/collection of debris from key Anderson County roads in order to provide access for emergency vehicles and resources into the impacted area; secondarily for economical, industrial, business and residential usage. Key roads in Anderson County are prioritized and identified for debris removal/collection based an average daily traffic counts (ADTC).
Emergency 9-1-1 calls will take priority of road clearing debris removal/collection crews and resources at all times to ensure access for emergency vehicles and resources into the impacted area to protect public health and safety following a major disaster or catastrophic event.

Recovery Operations

Does the plan address recycling?

The County Debris Plan discusses the issues of recycling such that The Anderson County Solid Waste Department will be able to work with numerous types of debris such as MSW, Construction and Demolition Debris, Trees, Stumps, Limbs, Leaves and Metal. Anderson County would have to out source hazardous materials. Anderson County will use all of its resources to recycle materials that are recyclable.

Anderson County would bring in a grinding operation if deemed necessary due to large quantities of stumps, leaves and limbs. Grinding operations will be done at the Starr C&D Landfill. We have contacted two companies for such an event.

Recovery Operations

Is there a process for the collection and disposal of hazardous waste and/or white goods?

Any material that is found to be classified as hazardous or toxic waste (HTW) will be reported immediately to the designated coordinating agency representative. At the coordinating agency representative's direction, this material will be segregated from the remaining debris in such a way as to allow the remaining debris to be loaded and transported. The debris manager will coordinate any Hazardous Waste the SC Department of Environmental Management and Control (SCDHEC) as appropriate for the situation. Items classified as Hazardous Waste WILL NOT be accepted. Individuals with material of this nature will be referred to the Anderson Department of Environmental Management (ADEM). The Anderson County Solid Waste Division has al list of qualified Hazardous Waste contractor that will assist individuals with these problems.

Debris Management Sites

Does the plan address debris monitoring of the pickup sites, Debris Management Sites (DMS) or Temporary Debris Storage and Reduction Sites (TDSR) and final disposal?

The plan addresses debris monitoring of the pickup sites, debris management sites, reduction sites and final disposal. In that debris storage and reduction sites will be identified and evaluated by County site selection teams comprised of solid waste, transportation/public works and emergency services/public safety staff who are familiar with the area. A listing of appropriate local, State, and Federal contacts will be developed by the appropriate staff to expedite the formation of the site selection team.

Debris Management Sites

Does the plan identify DMS' or TDSRs' and potential landfills for final disposal to include operation and site management procedures and staffing?

Initially debris will be removed directly to the Starr-Iva Construction and Debris landfill. However should there be a backlog; debris will be placed in temporary holding areas, determined before the onset of the disaster.

Collection sites will be on public property when feasible to facilitate the implementation of the mission and mitigate against any potential liability requirements. Activation of sites will be under the control of the Director of Solid Waste Management, and will be coordinated with other recovery efforts through the emergency operations center.

Site selection criteria will be developed into a checklist format for use by these teams to facilitate identification and assessment of potential sites. Criteria will include such factors of ownership of property, size of parcel, surrounding land uses and environmental conditions, and transportation facilities that serve the site. A site selection priority list is attached as an annex to this plan.

Environmental Monitoring Program

Does the plan address the environmental requirements?

The Anderson County Environmental Services Director will be responsible for identifying DMS and/or TDSRs and potential landfills for final disposal to include operation and site management procedures and staffing. The Anderson County Environmental Services Director will also be responsible for the establishment and operations planning, permitting and associated requirements such as site layouts and site preparation to include volume reduction methods for the various debris storage and reduction sites. Sites will be identified and evaluated by County site selection teams comprised of solid waste, transportation/public works and emergency services/public safety staff who are familiar with the area. A listing of appropriate local, State, and Federal contacts will be developed by the appropriate staff to expedite the formation of the site selection team.

Environmental Monitoring Program

Greg Smith, Anderson County Environmental Services Director will be responsible for ensuring the appropriate Environmental Monitoring Program / Site Closure procedures are establishment and implemented to include necessary planning, permitting and associated requirements in coordination with appropriate local, State, and Federal agencies.

SITE REMEDIATION

During the debris removal process and after the material has been removed from each of the debris sites, environmental monitoring will be needed to close each of the sites. This is to ensure that no long-term environmental contamination is left on the site. The monitoring will be done on three different media: ash, soil, and groundwater. The monitoring of the ash will consist of chemical testing to determine the suitability of the

material for landfilling. Monitoring of the soils will be by portable methods to determine if any of the soils are contaminated by volatile hydrocarbons. The monitoring of the groundwater will be done on selected sites to determine the probable effects of rainfall leaching through either the ash areas or the stockpile areas.

The plan address the environmental requirements through the Anderson County Environmental Services Director being responsible for ensuring that the appropriate Environmental Monitoring Program / Site Closure procedures are establishment and implemented to include necessary planning, permitting and associated requirements in coordination with appropriate local, State, and Federal agencies. To include site remediation during the debris removal process and after the material has been removed from each of the debris sites, environmental monitoring will be needed to close each of the sites. This is to ensure that no long-term environmental contamination is left on the site. The monitoring will be done on three different media: ash, soil, and groundwater.

If utilized each temporary debris staging and reduction site will eventually be emptied of all material and be restored to its previous condition and use.

CONTRACTING PROCEDURES

Does the plan address contracting/procurement procedures?

Contracting for labor and equipment may be necessary if the magnitude of the emergency debris clearance, removal and disposal operation is beyond the capabilities of the local force account resources; State resources, mutual aid agreements and volunteer labor and equipment. The Debris Manager will be familiar with contracting procedures for he/she will be required to define specific debris removal tasks and recommend specific contract types based on the magnitude of the debris clearance, removal and disposal operation and the site clearance and restoration requirements. The Emergency Management Director has the responsibility for the Anderson County Council for developing, processing and administering debris clearance, removal and disposal contracts. General three types of contracts that may be used for debris operations; i.e. Time and Materials Contracts, Unit Price Contracts, and Lump Sum Contracts are the primary contracts to be utilized.

Private Property Demolition and Debris Removal

Does the plan address the authority and processes for private property debris removal?

Debris located on private property is the responsibility of the owner. Long Term Recovery Operations will provide information to Private and Business owners as to any assistance they may qualify for under the FEMA Individual Assistance Program which will be made available after resolving any of their insurance providers' coverage in the event of a Presidential Declared Disaster which includes Public Assistance.

The County debris plan address the authority and processes for private property debris removal directing The Anderson County Transportation Division be responsible for removing debris from the public right-of-way. Only when pre approved and it is deemed in the public interest will County Transportation Division remove debris from private property.

Public Information Plan

Does the plan address the dissemination of information to the general public and media?

The debris plan addresses the dissemination of information to the general public and media through the office of the public information officer's responsibilities to include, but not limited to: Coordinate press releases, contacts with local organizations, individuals, and media; and public notices for debris removal and disposal contracts. The PIO will develop a proactive information management plan emphasis will be placed on actions the public can perform to expedite the clean-up process.

□ □ **Does the applicant have a list of pre-qualified contractors?**

□ □ **Does the applicant have documentation demonstrating how the list was obtained?**

The County will also develop and maintain a list of approved pre-qualified contractors who have the capability to provide debris removal, collection, and disposal in a cost effective, expeditious, and environmentally sound manner following a disaster. The County will through its purchasing department issue a request for qualifications (RFQ) to accumulate this information.
The County Debris Plan is designed to provide organizational structure, guidance, and standardized procedures for clearance, removal and disposal of debris caused by a major debris-generating event. To establish the most efficient and cost effective methods to resolve disaster debris removal and disposal issues. To expedite debris response efforts that will provide visible signs of recovery designed to mitigate the threat to health, safety, and welfare of county residents. To coordinate partnering relationships through communications and pre-planning with local, State and Federal agencies involved with debris management responsibilities. To implement and coordinate private sector debris removal and disposal contacts to maximize cleanup efficiencies.

The County Debris Plan is a "living document" and will be modified and updated as needed and no less than annually.

Public Assistance Pilot Program
Debris Management Plan Outline

I. STAFF ROLES AND RESPONSIBILITIES

A. Staffing Organizational Chart

The County of Anderson is responsible for developing a debris management plan, selecting a debris manager, and a debris management staff. The debris management staff shall be comprised of the following personnel or department representative: County Emergency Management Division, County Transportation Division and the County Solid Waste Division.

B. Staff Development Roles & Responsibilities

Anderson County Council Ordinance number 43 in reference to Emergency Preparedness; Chapter 18 section 18-56 "Appointment, authority, cooperation of county forces, section (a) the emergency preparedness director is hereby designated and appointed as chief executive officer of the county council for the purpose of preparing for and executing all duties and functions specified in all acts of the general assembly relating to civil defense and emergency preparedness. (b) the emergency preparedness director shall have the duty of coordinating overall emergency services for the county during emergency and non-emergency periods and of coordinating the activities planning and preparedness of the county government for the purpose of disasters. (c) it is the intent of this division to vest in the emergency preparedness director the fullest authority assignable by statute to coordinate the disaster plans and operations for the county. (d) all employees of departments, commissions, boards, institutions and other agencies of the county, designated as civil emergency forces shall cooperate with the director in formulation and maintenance of the county emergency operations plans.

The Anderson County Debris Management Staff shall be comprised of personnel representative of various County departments and collectively will be responsible for the development of the County Debris Management Plan with individual responsibilities to include but not limited too the following:

1. Administration

Function: The administrative section responsibilities will include, but not limited to: housekeeping, supplies, equipment, funding, accounting. In that the administrative section will serve as reimbursement coordinator and will provide for the collection and compilation of all labor, equipment hours, materials and supplies and related expenditures concerning disaster debris recovery.

2. Contracting and Procurement

Function: The contracting and procurement section responsibilities will include, but not limited to: Bidding requirements, forms, advertisements for bids, instructions to bidders, contract development.

3. Legal

Function: The legal section responsibilities will include, but not limited to: Contract review, right of entry permits, community liability, condemnation of buildings, land acquisition for temporary staging and reduction sites, land acquisition for disposal sites, insurance.

4. Operations

Function: The operations section responsibilities will include, but not limited to: Supervision of government and contract resources and overall project management.

5. Engineering

Function: The engineering section responsibilities will include, but not limited to: Detailed damage assessment, identification of project tasks, assignments of tasks, preparation of estimates, plans, specifications, and recommendation of contract award.

6. Public Information Specialist

Function: The public information office responsibilities will include, but not limited to: Coordinate press releases, contacts with local organizations, individuals, and media; and public notices for debris removal and disposal contracts. The PIO will develop a proactive information management plan emphasis will be placed on actions the public can perform to expedite the clean-up process.

C. Emergency Communications Plan

The County Emergency Operations Center (EOC) maintains several means of communications systems and redundant /backup systems; i.e. 800MZ system; NEXTEL cellular telephone communication systems; satellite communication systems; and AT & T landline telephone communications system.

D. Health and Safety Plan and Procedures

The County complies with all Department of Health and Environmental Control requirements to maintain and ensure the highest quality of health and safety standards for its residents.

E. Training Schedule

The staff will coordinate all training requirements with appropriate State and Federal agencies responsible for disaster response and recovery operations. The staff will be assigned the task of:

1. Assembling to develop a Debris Management Plan.
2. Developing an analysis and debris management capability
3. Discourage development in hazardous zones.
4. Develop public information and education programs.

5. Train personnel in debris management techniques.
6. Maintain pre-disaster maps, blueprints, photos and other documents.
7. Make a list of critical facilities (streets, roads, and bridges).
8. Identify non-government groups that could assist.

II. Situation and Assumptions

A. Design Disaster Event

MISSION

The County of Anderson Debris Management Plan provides a unified and coordinated approach by the County Divisions of Transportation, Solid Waste and Emergency Services/Public Safety to facilitate and coordinate the removal, collection, and disposal of debris following a disaster, to mitigate against any potential threat to the health, safety, and welfare of the impacted citizens, and expedite recovery efforts in the impacted area, and address any threat of significant damage to improved public or private property.

PURPOSE

To provide organizational structure, guidance, and standardized procedures for clearance, removal and disposal of debris caused by a major debris-generating event.

To establish the most efficient and cost effective methods to resolve disaster debris removal and disposal issues.

To expedite debris response efforts that will provide visible signs of recovery designed to mitigate the threat to health, safety, and welfare of county residents.

To coordinate partnering relationships through communications and pre-planning with local, State and Federal agencies involved with debris management responsibilities.

To implement and coordinate private sector debris removal and disposal contacts to maximize cleanup efficiencies.

SITUATION

Natural and man-made disasters precipitate a variety of debris that includes, but is not limited to, such things as trees, sand, gravel, building/construction materials, vehicles, personal property, etc.

The quantity and type of debris generated from any particular disaster is a function of the location and kind of event experienced, as well as its magnitude, duration, and intensity.

The quantity and type of debris generated, its location, and the size of the area over which it is dispersed directly impacts the type of collection and disposal methods used to address the debris problem, associated costs incurred, and the speed with which the problem can be addressed.

In a major or catastrophic disaster, Anderson County may have difficulty in locating staff, equipment, and funds to devote to debris removal, in the short as well as long term.

Private contractors play a significant role in the debris removal, collection, reduction, and disposal process.

The debris management program implemented by Anderson County will be based on the waste management approach of reduction, reuse, and reclamation. Resource recovery, incineration, and land-filling, respectively.

ASSUMPTIONS

A major natural disaster that requires the removal of debris from public or private lands and water could occur at any time.

The amount of debris resulting from a major natural disaster will exceed the county's removal and disposal capabilities.

The county will contract for additional resources to assist in the debris removal, reduction, and disposal process.

The Anderson County Council will declare that a local state of disaster exists and request state and federal assistance.

The Governor of South Carolina will declare a state of emergency that will authorize state resources to assist in the removal and disposal of debris. If the disaster exceeds both local and state resources, the governor will request a Presidential Disaster Declaration.

The President will approve a Presidential Disaster Declaration that will authorize federal resources to assist in removal and disposal of debris.

ORGANIZATION AND CONCEPT OF OPERATIONS

The Anderson County Transportation Department is responsible for the debris removal function. The County Transportation Department will work in conjunction with designated support agencies utility companies, waste management firms, and trucking companies, to facilitate the debris clearance, collection, reduction, and disposal needs following a disaster. The County Transportation Department will be responsible for removing debris from the public right-of-way. Only when pre approved and it is deemed in the public interest will County Transportation Department remove debris from private property. County Transportation Department will further stage equipment in strategic locations locally as well as regionally, if necessary, to protect the equipment from damage, preserve the decision maker's flexibility for employment of the equipment, and allow for the clearing crews to begin work immediately after the disaster. Because of the limited quantity of resources and service commitments following the disaster, may be relying heavily on private contractors to remove, collect, and manage debris for reuse, resource recovery, reduction, and disposal. Using private contractors instead of government workers in debris removal activities has a number of benefits. It shifts the burden of conducting the work from Anderson County to the private sector, freeing up government personnel to devote more time to their regularly assigned duties. Private contracting also stimulates local, regional, and State economies impacted by the storm, as well as maximizes State and local governments' level of financial assistance from the Federal government. Private contracting allows the County to more closely tailor its contract services to its specific needs. The entire process (i.e., clearance, collection, transporting, reduction, and disposal, etc.) or segments of the process can be contracted out.

The Anderson County Transportation Department will also develop and maintain a list of approved contractors who have the capability to provide debris removal, collection, and disposal in a cost effective, expeditious, and environmentally sound manner following a disaster.

B. Forecasted debris

1. Forecasted Types

To facilitate the debris management process, debris will be segregated by type. It is recommended that the categories of debris established for recovery operations will be standardized. Debris removed will consist of two broad categories (clean wood debris and construction and demolition debris. Most common hurricane-generated debris will consist of 30% clean woody material and 70% C&D. Of the 70% mixed C&D it is estimated 42% will be burnable but require sorting, 5% will be soil, 15% will be metals, and 38% landfill.

2. Forecasted Estimated Debris Quantities:

ESTIMATING DEBRIS QUANTITIES

The formula for estimating debris quantity is: **Q=H(C)(V)(B)(S)**

H (Households)=Population/3 (3 persons per household)
C (Category of Storm)=Factor (See table below)
V (Vegetation Multiplier)= Factor (See table below)
B (Commercial Density Multiplier)= Factor (See table below)
S (Precipitation Multiplier)= Factor (See table below)

Hurricane Category	Value of "C" Factor
1	2 CY
2	8 CY
3	26 CY
4	50 CY
5	80 CY

Vegetative Cover	Value of "V" Multiplier
Light	1.1
Medium	1.3
Heavy	1.5

Commercial Density	Value of "B" Multiplier
Light	1.0
Medium	1.2
Heavy	1.3

Precipitation	Value of "S" Multiplier
None to Light	1.0
Medium to Heavy	1.3

Once the amount of debris has been estimated, Anderson County will require temporary storage sites the size of which can be determined by taking the following factors into consideration:

1. The debris pile shall be stacked to a height of no more than 10 feet.
2. 60% usage of the land area will be devoted to roads, safety buffers, burn pits, household hazardous waste, etc.,.
3. 10 foot stack height = 3.33 yards
4. 1 acre = 4,840 square yards (sy)
5. Total volume per acre = 4,840 sy/ac x 3.33y = 16,133 cy/ac.

Using the above assumptions, the estimate of total debris from any hurricane will be within 30% plus or minus of the actual amount of debris accumulated. Anderson County has estimated that under an average scenario, e.g., is a Category 3 hurricane, medium vegetation cover, medium commercial density, and medium to heavy precipitation, the amount of acres needed for a temporary landfill is 54.24 acres. The calculation (assuming a population of 30,000) is as follows:

Q = H(C)(V)(B)(S)
Q = 10,000 x 26 x 1.3 x 1.2 x 1.3
Q = 527,280cy of debris.

527,280 (cy of debris / 16,133 (cy/ac) = 32.68 acres of debris.
32.68 acres x 1.66 (60% more area needed for roads, etc…)= 54.24 acres.

Note: To help visualize what 527,280cy of debris looks like, picture a building occupying 1 acre. 1,000,000 cy of debris would create a stack 62' high on one acre. That building would be 32.67 feet high or approximately 3.26 stories high.

3. Forecasted Locations

A) City of Anderson (30,000 population)
B) City of Belton (4,500 population)
C) City of Williamston (3,800 population)
D) Town of Honea Path (3,500 population)
E) Town of Pendleton (3,000 population)
F) Town of Iva (1500 population)
G) Town of Pelzer (700 population)
H) Town of West Pelzer (500 population)
I) Town of Starr (300 population)
J) County of Anderson (172,748 population)

Debris forecasted locations makes the assumption that the population density in Anderson County is no greater in any given rural unincorporated area than that of the most populous municipality that being the city of Anderson.

III. Debris Collection Plan

A. Priorities

Debris Collection Removal Priorities

The debris removal/collection process must be initiated promptly and conducted in an orderly, effective manner in order to protect public health and safety following a major disaster or catastrophic event. To achieve this objective, the first priority will be the removal/collection of debris from key roads in order to provide access for emergency vehicles and resources into the impacted area. Removal/collection of debris from roadways such as that from State and municipal roadways as well as that of private subdivisions will be the responsibility of that entity, however the County reserves the right in coordination with that entity to remove/collect such roadways debris to allow for emergency vehicle access and for the protection of public health and safety.

The first priority will be removal/collection of debris from key Anderson County roads in order to provide access for emergency vehicles and resources into the impacted area; secondarily for economical, industrial, business and residential usage. Key roads in Anderson County are prioritized and identified for debris removal/collection as follows:

1. Roads with an average daily traffic count greater than 5,000 vehicles daily.
2. Roads with an average daily traffic count between 4,000 and 5,000 vehicles daily.
3. Roads with an average daily traffic count between 3,000 and 4,000 vehicles daily.
4. Roads with an average daily traffic count between 2,000 and 3,000 vehicles daily.
5. Roads with an average daily traffic count between 1,000 and 2,000 vehicles daily.
6. Roads with an average daily traffic count less than 1,000 vehicles daily.

Note: 9-1-1 emergency calls will take priority of road clearing debris removal/collection crews and resources at all times to ensure access for emergency vehicles and resources into the impacted area to protect public health and safety following a major disaster or catastrophic event.

The need and demand for critical services will be increased significantly following a disaster. Therefore, the second priority that debris removal resources will be assigned is providing access to critical facilities pre-identified by State and local governments. Critical facilities in Anderson County have been identified as:

1. Anderson County Hospital (AnMed).
2. MedShore Ambulance Service.
8. Anderson County Civic Center and other designated shelter
3. Anderson County Sheriff Department.
4. Anderson County Courthouse and essential government facilities
5. Anderson County Fire Headquarters.
6. Anderson Water Treatment Facility.
7. Anderson County Airport.s.
9. Schools used as emergency shelters (TL Hanna & Westside High Schools).
10. Campbell Veterans Nursing Home and other nursing home facilities.
11.Patrick B. Harris Psychiatric Hospital.
12. Duke Energy Facilities and Public Utilities.

The third priority for the debris removal teams to address will be the elimination of debris related threats to public health and safety. This will include such things as the repair, demolition, or barricading of heavily damaged and structurally unstable buildings, systems, or facilities that pose a danger to the public. Any actions taken to mitigate or eliminate the threat to the public health and safety must be closely coordinated with the owner or responsible party. If access to the area can be controlled, the necessary actions can be deferred.

B. Response Operations

During the recovery phase the County will activate the debris management plan, coordinate with needs assessment team. Begin documenting costs. Coordinate and track resources (public and private). Establish priorities regarding allocation and use of available resources. Identify and establish debris temporary storage and disposal sites (local, regional). Address any legal, environmental, and health issues relating to the debris removal process. Continue to keep the public informed through the Public Information Officer (PIO).

Emergency roadway debris removal will identify critical routes that are essential to emergency operations. Roadway debris removal involves the opening of arterial roads and collector streets by moving debris to the shoulders of the road. There is no attempt to physically remove or dispose of the debris, only to clear key access routes to expedite the following: movement of emergency vehicles; law enforcement; resumption of critical services; assessment of damage to key public facilities and utilities such as schools, hospitals, government buildings, and utilities.

The type of debris that may be encountered such as trees blown-down and broken limbs; yard trash such as outdoor furniture, trash cans, utility poles, power-telephone-cable TV lines, transformers and other electrical devices; building debris such as sheds, and signs; building debris such as roofs, sheds and signs; and personal property such as clothing, appliances, boats, cars, trucks and trailers. Define the priority to open access to other critical community facilities, such as municipal buildings, water treatment plans, wastewater treatment plants, power generation units, and airports.

Coordinate work with local utility crews to ensure safety issues are addressed with regards to energized power lines and gas lines. Contact the local Department of Transportation (DOT) office to discuss the priority for clearance on State roads.

Debris that is moved or relocated while performing clearing operations should be placed as close as possible to the edge of the roadway.

C. Recovery Operations

During the recovery phase the County will continue to collect, store, reduce, and dispose of debris generated from the event in a Cost-effective and environmentally responsible manner. Continue to document costs. Upon completion of debris removal mission, close out debris storage and reduction sites by developing and implementing the necessary site restoration actions. Perform necessary audits of operation and submit claim for Federal assistance.

Immediate debris clearing actions should be supervised by County personnel using all available resources. Requests for additional assistance and resources should be made to the State EOC through Anderson County at the Anderson County EOC. Requests for Federal assistance will be requested through the State Coordinating Officer (SCO) to the FEMA Federal Coordinating Officer (FCO). Special crews equipped with chain saws may be required to cut up downed trees. This activity is hazardous, and common sense safety considerations are necessary to reduce the chance of injury and possible loss of life. When live electric lines are involved, work crews will coordinate with local utility companies to have power lines de-energized for safety reasons. Front-end loaders and dozers will be quipped with protective cabs. Driveway cutouts, fire hydrants, valves, and storm-water inlets will be left unobstructed. All personnel will wear proactive gear, such as hard hats, gloves, goggles, and safety shoes. The USDA Forest Service and other State and Federal land management agencies are equipped for fast responses to tornadoes, and hurricanes. Assistance would be requested through the Anderson County EMD at the Anderson County EOC and the request will be made to the State Coordinating Officer (SCO) to the FEMA Federal Coordinating Officer (FCO) according to standard procedures.

2. Collection Methods

a. Curbside Pick-Up (see Appendix J)

Debris may continue to accumulate as residents bring debris from their properties to public rights-of-way. Typically, this occurs in three stages:

Stage 1: Woody Debris and yard waste moved to right-of-way.

Stage 2: Household waste, such as damaged personal goods, moved to right-of-way.

Stage 3: Construction and demolition materials removed by the homeowner prior to the receipt of insurance and individual assistance payments.

Residents should not mix garbage with debris. Debris deposited at the curbside must be disaster-related to be eligible for pickup and disposal by the applicant. Applicants should resume normal garbage pick-up schedules as soon as possible.

Construction and demolition materials from minor or major repairs or reconstruction by contractors should not be deposited at the curbside. Contractors should remove and deposit the debris at approved landfills.

Insurance proceeds usually cover the cost for demolition debris removal from private property. Remember, only disaster-related debris removal costs not covered by insurance are eligible for reimbursement. Watch for non-disaster related materials (bagged grass clippings, household garbage, automobile parts etc.).

When it becomes apparent that the debris being brought to the curb is not disaster-related, or is reconstruction debris, the Public Assistance Officer (PAO-FEMA) should negotiate with the State counterpart to set a realistic deadline and make sure the applicants have advance notice. *Note: The Anderson County Transportation Director in conjunction with the Solid Waste Manage should evaluate this cut-off point first, and issue a notice to the public announcing the cut off date.*
For example, it is unrealistic to impose a deadline that takes effect 48 hours later. For large events, it is unrealistic to set deadlines immediately following the disaster. However, discussions with the State on the need to establish deadlines should begin early.

Remember, the time extension authority given to the State applies only to disaster-related debris. That authority does not apply to curbside pick-up of non-disaster debris, or to reconstruction debris.

b. Public Rights-of Way Debris Removal and Disposal

The initial roadside piles of debris become the dumping location for additional yard waste and other storm-generated debris, such as construction material, personal property, trash, white metals such as refrigerators, washers, dryers and hot water heaters, roofing and even household, commercial, and agricultural chemicals. This phase will consist of removing and subsequent disposal of the debris accumulated during previous phase and continued debris operations.

The debris manager may develop an independent team using the local and State personnel to monitor the removal activities. The debris manager may conduct daily update briefings to ensure that all major debris removal and disposal actions are reviewed and approved by the local debris manager. The debris manager will coordinate with local and State DOT and law enforcement authorities to ensure that traffic control measures expedite debris removal activities.

DEBRIS REMOVAL LOCATIONS

The debris removal process must be initiated promptly and conducted in an orderly, effective manner in order to protect public health and safety following a major disaster or catastrophic event. To achieve this objective, the first priority will be to clear debris from key roads in order to provide access for emergency vehicles and resources into the impacted area. Clearance of debris from roadways such as that from State and municipal roadways as well as that of private subdivisions will be the responsibility of that entity, however the County reserves the right in coordination with that entity to clear such roadways to allow for emergency vehicle access and for the protection of public health and safety.

The first priority will be to clear debris from key Anderson County roads in order to provide access for emergency vehicles and resources into the impacted area; secondarily for economical, industrial, business and residential usage. Key roads in Anderson County are prioritized and identified as follows:

1. Roads with an average daily traffic count greater than 5,000 vehicles daily.
2. Roads with an average daily traffic count between 4,000 and 5,000 vehicles daily.
3. Roads with an average daily traffic count between 3,000 and 4,000 vehicles daily.
4. Roads with an average daily traffic count between 2,000 and 3,000 vehicles daily.
5. Roads with an average daily traffic count between 1,000 and 2,000 vehicles daily.
6. Roads with an average daily traffic count less than 1,000 vehicles daily.

Note: 9-1-1 emergency calls will take priority of road clearing crews and resources at all times to ensure access for emergency vehicles and resources into the impacted area to protect public health and safety following a major disaster or catastrophic event.

DEBRIS CLASSIFICATION

The Anderson County Solid Waste Department will be able to work with numerous types of debris such as MSW, Construction and Demolition Debris, Trees, Stumps, Limbs, Leaves and Metal. Anderson County would out source hazardous materials clean-up to:

Anderson County will use all of its resources to recycle materials that are recyclable.

***Anderson County would take all of its metal materials to the following company for recycling:**

Carolinas Recycling Group, LLC
428 N. Gossett Street
Anderson, SC 29621
864-225-8731
Contact: Kym J. Cleveland

***Anderson County would contract recycling of its electronic equipment with the following companies:**

Cleanlites Recycling South, Inc.
100 Fine Road
North, South Carolina
803-247-4571
Contact: Steve Strictland

Earth Protection Services, Inc.
102 Twentynine Court
Williamston, SC
864-847-7700
Contact: John Scsott

***Anderson County would bring in a grinding operation if deemed necessary due to large quantities of stumps, leaves and limbs. Grinding operations will be done at the Starr C&D Landfill. We have contacted 2 companies for such an event.**

A.C.E. Environmental Inc.
508 Cherokee Rd.
Pelzer, SC 29669-9183
864-947-8100
Contact: Mike and Vickie Phillips

S R Grading, Inc.
1710 Hood Road
Greer, SC 29650
864-877-0154
Contact: Chuck Harvey

Hensons Inc.
Simpsonville, SC
828-859-5836
Contact: Ellis Fincher

2. Collection Method

To facilitate the debris management process, debris will be segregated by type. It is recommended that the categories of debris established for recovery operations will be standardized. Debris removed will consist of two broad categories (clean wood debris and construction and demolition debris. Most common hurricane-generated debris will consist of 30% clean woody material and 70% C&D. Of the 70% mixed C&D it is estimated 42% will be burnable but require sorting, 5% will be soil, 15% will be metals, and 38% landfill.

Definition of classifications of debris are as follows:

Burnable Materials: Burnable materials will be of two types with separate burn locations:

Burnable Debris: Burnable debris includes, but is not limited to, damaged and disturbed trees; bushes and shrubs; broken, partially broken and severed tree limbs; and bushes. Burnable debris consists predominately of trees and vegetation. Burnable debris does not include garbage or construction and demolition material debris.

Burnable Construction Debris: Burnable construction and demolition debris consists of non-creosote structural timber, wood products, and other materials designated by the coordinating agency representative.

Non-burnable Debris: Non-burnable construction and demolition debris includes, but is not limited to, creosote timber, plastic, glass, rubber and metal products, sheet rock, roofing shingles, carpet, tires, and other materials as may be designated by the coordinating agency. Garbage will be considered non-burnable debris.

Stumps: Stumps will be considered tree remnants exceeding 24 inches in diameter; but no taller than 18 inches above grade, to include the stump ball. Any questionable stumps shall be referred to the designated coordinating agency representative for determination of its disposition.

Ineligible Debris: Ineligible debris to remain in place includes, but is not limited to, chemicals, petroleum products, paint products, asbestos, and power transformers.

Anderson County would out source hazardous materials. Any material that is found to be classified as hazardous or toxic waste (HTW) shall be reported immediately to the designated coordinating agency representative. At the coordinating agency representative's direction, this material shall be segregated from the remaining debris in such a way as to allow the remaining debris to be loaded and transported. Standing broken utility poles, damaged and downed utility poles and appurtenances, transformers and other electrical material will be reported to the coordinating agency representative and or Duke Energy representative. Emergency workers shall exercise due caution with existing overhead and underground utilities and above ground appurtenances, and advise the appropriate authorities and or Duke Energy representative of any situation that poses a health or safety risk to workers on site or to the general population. Anderson County will use all of its resources to recycle materials that are recyclable.

4. Collecting Hazardous Waste and White Goods

Any material that is found to be classified as hazardous or toxic waste (HTW) shall be reported immediately to the designated coordinating agency representative. At the coordinating agency representative's direction, this material shall be segregated from the remaining debris in such a way as to allow the remaining debris to be loaded and transported.

Household Hazardous Waste Removal (HHW)

The debris manager will coordinate any household hazardous waste (HHW) with the Anderson County Solid Waste Manager, the Department of Public Health and the Anderson County Department of Environmental Management. HHW may be generated as a result of a major natural disaster. HHW may consist of common household chemicals, propane tanks, oxygen bottles, batteries, and industrial and agricultural chemicals. These items will be mixed into the debris stream and will require close attention throughout the debris removal and disposal process. HHW response teams will be assigned and respond ahead of any removal efforts. Appropriate coordination with regulatory agencies concerning possible regulatory waivers and other emergency response requirements will be adhered too.

Arrangements for salvageable hazardous materials to be collected and segregated based on their intended use. Properly trained personnel or emergency response HHW contractors will accomplish removal of hazardous waste. Coordination with State regulatory agencies to ensure cleanup actions meet local, State, and Federal regulations. Complete HHW identification and segregation before building demolition begins. Qualified contractors will remove HHW debris. Regular demolition contractors can remove uncontaminated debris.

Hazardous Waste (HW)

The debris manager will coordinate any Hazardous Waste the SC Department of Environmental Management and Control (SCDHEC) as appropriate for the situation. Items classified as Hazardous Waste **WILL NOT** be accepted**.** Individuals with material of this nature will be referred to the Anderson Department of Environmental Management (ADEM). The Anderson County Solid Waste Division has al list of qualified Hazardous Waste contractor that will assist individuals with these problems.

4. Monitoring Staff and Assignments

IV. Debris Management Sites

A. Site Management

1. Site Manager, Monitoring Staff and Assignments, Safety Personnel:

Site Management, Monitoring staff and assignments and Safety Personnel will be the responsibility of the Greg Smith, Anderson County Environmental Services Director.

SITE SELECTION

Debris storage and reduction sites will be identified and evaluated by County site selection teams comprised of solid waste, transportation/public works and emergency services/public safety staff who are familiar with the area. A listing of appropriate local, State, and Federal contacts will be developed by the appropriate staff to expedite the formation of the site selection team.

Initially debris will be removed directly to the Starr-Iva Construction and Debris landfill. However should there be a backlog; debris will be placed in temporary holding areas, determined before the onset of the disaster and until after the local traffic has been restored. Temporary debris collection sites should be readily accessible by recovery equipment and should not require extensive preparation or coordination for use. Collection sites will be on public property when feasible to facilitate the implementation of the mission and mitigate against any potential liability requirements. Activation of sites will be under the control of the Director of Solid Waste Management, and will be coordinated with other recovery efforts through the emergency operations center.

Site selection criteria will be developed into a checklist format for use by these teams to facilitate identification and assessment of potential sites. Criteria will include such factors of ownership of property, size of parcel, surrounding land uses and environmental conditions, and transportation facilities that serve the site. A site selection priority list is attached as an annex to this plan.

B. Establishment and Operations Planning:

Greg Smith, Anderson County Environmental Services Director will be responsible for the establishment and operations planning, permitting and associated requirements such as site layouts and site preparation to include volume reduction methods for the various Debris storage and reduction sites will be identified and evaluated by County site selection teams comprised of solid waste, transportation/public works and emergency services/public safety staff who are familiar with the area. A listing of appropriate local, State, and Federal contacts will be developed by the appropriate staff to expedite the formation of the site selection team.

TDSL Locations:

The following is a list of temporary holding sites: map locations attached.

1. King David Convenience Center.
2. White Plains Convenience Center
3. Harris-bridge Road Convenience Center
4. Anderson Regional MRF Center
5. Townville/Forks Convenience Center
6. Craytonville Convenience Center
7. Carswell Convenience Center
8. Friendship/Shady Grove Convenience Center
9. Slabtown/3&20 Convenience Center
10. Jockey Lot/Whitefield Convenience Center
11. Agnew/Mountain Creek Convenience Center
12. Generostee/Parker Bowie Convenience Center
13. Civic Center Convenience Center
14. White Street Convenience Center
15. Pendleton Landfill

SITE LOCATION / LAYOUT

Once the debris is removed from the damaged area, it will be taken directly to the Starr C & D Landfill; however if necessary, it may be taken to temporary debris storage and reduction sites. See Appendix G: Table of Pre-identified temporary debris storage and reduction sites (TDSR).

Removal and disposal actions should be handled at the lowest level possible based on the magnitude of the event. It follows the normal chain of responsibility, i.e., local level, county level, State level, and when resources are exceeded at each level of responsibility, Federal assistance may be requested according to established procedures. Because of the limited debris removal and reduction resources, TDSRs are establishment and placed into operation.

Site Preparation.

1. The topography and soil conditions should be evaluated to determine best site layout. Ways to make remediation and restoration easier when planning site preparation will be considered.

Site Operations.

1. If the site is also an equipment staging area, fueling and equipment repair will be monitored to prevent and mitigate spills such as petroleum products and hydraulic fluids.

2. Awareness of and mitigate of issues that might irritate the neighbors will be close monitored, such as:
    a. Smoke – proper construction and operation of incineration pits. Don't overload air curtains.
    b. Dust – employ water trucks.
    c. Noise – construct perimeter berms.
    d. Traffic – proper layout of ingress and egress procedures to help traffic flow.

VOLUME REDUCTION METHODS/CLASSIFICATION

Definition of classifications of debris are as follows:

Burnable Materials: Burnable materials will be of two types with separate burn locations:

Burnable Debris: Burnable debris includes, but is not limited to, damaged and disturbed trees; bushes and shrubs; broken, partially broken and severed tree limbs; and bushes. Burnable debris consists predominately of trees and vegetation. Burnable debris does not include garbage or construction and demolition material debris.

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Ineligible Debris: Ineligible debris to remain in place includes, but is not limited to, chemicals, petroleum products, paint products, asbestos, and power transformers.

Any material that is found to be classified as hazardous or toxic waste (HTW) shall be reported immediately to the designated coordinating agency representative. At the coordinating agency representative's direction, this material shall be segregated from the remaining debris in such a way as to allow the remaining debris to be loaded and transported. Standing broken utility poles, damaged and downed utility poles and appurtenances, transformers and other electrical material will be reported to the coordinating agency representative. Emergency workers shall exercise due caution with existing overhead and underground utilities and above ground appurtenances, and advise the appropriate authorities of any situation that poses a health or safety risk to workers on site or to the general population.

Household Hazardous Waste Removal (HHW)

The debris manager will coordinate any household hazardous waste (HHW) with the Anderson County Solid Waste Manager and SC Department of Health and Environmental Control (SCDHEC).

Household Hazardous Waste (HHW) may be generated as a result of a major natural disaster. HHW may consist of common household chemicals, propane tanks, oxygen bottles, batteries, and industrial and agricultural chemicals. These items will be mixed into the debris stream and will require close attention throughout the debris removal and disposal process.

Household Hazardous Waste (HHW) response teams will be assigned and respond ahead of any removal efforts. Coordination will be made with regulatory agencies concerning possible regulatory waivers and other emergency response requirements.

Arrangements for salvageable hazardous materials to be collected and segregated based on their intended use. Properly trained personnel or emergency response HHW contractors will accomplish removal of hazardous waste. Coordination with regulatory agencies will ensure cleanup actions meet local, State, and Federal regulations.

Household Hazardous Waste (HHW) identification and segregation will be completed before building demolition begins. Qualified contractors will remove HHW debris. Regular demolition contractors can remove uncontaminated debris.

Hazardous Waste (HW)

The debris manager will coordinate any hazardous waste (HW) with the South Carolina Department of Health and Environmental Control (SCDHEC) as appropriate for the situation. Items classified as hazardous waste WILL NOT be accepted. Individuals with material of this nature will be referred to the Anderson Department of Environmental Management (ADEM). The Anderson County Solid Waste Division has a list of qualified Hazardous Waste contractor that will assist individuals with these issues.

6. Recycling

The Anderson County Solid Waste Department will be able to work with numerous types of debris such as MSW, Construction and Demolition Debris, Trees, Stumps, Limbs, Leaves and Metal. Anderson County would have to out source hazardous materials. Anderson County will use all of its resources to recycle materials that are recyclable.

Anderson County would bring in a grinding operation if deemed necessary due to large quantities of stumps, leaves and limbs. Grinding operations will be done at the Starr C&D Landfill. We have contacted two companies for such an event**.**

Anderson County would take all of its metal materials to the following company:

Carolinas Recycling Group, LLC
428 N. Gossett Street
Anderson, SC 29621
864-225-8731
Contact: Kym J. Cleveland

Anderson County would contract out its electronic equipment with the following companies:

Cleanlites Recycling South, Inc.
100 Fine Road
North, South Carolina
803-247-4571
Contact: Steve Strictland

Earth Protection Services, Inc.
102 Twentynine Court
Williamston, SC
864-847-7700
Contact: John Scsott

Volume Reduction by Recycling

Recycling reduces mixed debris volume before it is hauled to a landfill. Recycling is attractive because there may be an economic value to the recovered material if it can be sorted and sold. A portable Materials Recovery Facility could be set up at the site. Metals, wood, and soils are prime candidates for recycling. The major drawback is the potential environmental impact of the recycling operation. In areas where there is a large usage of chemical agricultural fertilizer, the recovered soil may be too contaminated for use on residential or existing agricultural land.

Hurricanes and Tornadoes may present opportunities to contract out large-scale recycling operations and to achieve an economic return from some of the prime contractors who exercise their initiative to segregate and recycle debris as it arrives at the staging and reduction sites.

Recycling should be considered early in the debris removal and disposal operation because it may present an opportunity to reduce the overall cost of the operation. The following materials are suitable for recycling:

1. Metals: Hurricanes and tornadoes may cause extensive damage to mobile homes, sun porches, and green houses. Most of the metals are non-ferrous and suitable for recycling. Trailer frames and other ferrous metals are also suitable for recycling. Metals can be separated using an electromagnet. Metals that have been processed to recycling can be sold to metal recycling firms.

2. Soils: Cleanup operations using large pieces of equipment pick up large amounts of soil. The soil is transported to the staging and reduction sites where it is combined with other organic materials that will decompose over time. Large amounts of soil can be recovered if the material is put through some type of screen or shaker system. This procedure can produce significant amounts of soil that can either be sold or recycled back into the agricultural community. This soil could also be used at local landfills for cover. It is more expensive to transport and pay tipping fees at local landfills than to sort out the heavy dirt before moving the material. Monitoring and testing of the soil may be necessary to ensure that it is not contaminated with chemicals.

3. Wood: Woody debris can be either ground or chipped into mulch.

4. Construction Materials: Concrete block and other building materials can be ground and used for other purposes. Construction materials and wood can also be shred to reduce volume. This construction material could also be used at local landfills for cover.

5. Residue Material: Residue material that cannot be recycled, such as cloth, rugs, and trash, can be sent to a landfill for final disposal.

DEBRIS DISPOSAL AND REDUCTION

Once the debris is removed from the damage sites, it will be taken directly to the Starr/Iva Construction and Demolition Landfill. Methods of disposal include, but are not limited to; burning, recycling, grinding/chipping and landfill.

Grinding and chipping will be utilized as a viable reduction method. Grinding and chipping reduces the volume on a 4 to 1 ratio. For grinding and chipping to be feasible, 25% of volume remaining must have some benefit or use.

Anderson County would bring in a grinding operation if deemed necessary due to large quantities of stumps, leaves and limbs. Grinding operations will be done at the Starr C&D Landfill. We have contacted 2 companies for such an event.

A.C.E. Environmental Inc.
508 Cherokee Rd.
Pelzer, SC 29669-9183
864-947-8100
Contact: Mike and Vickie Phillips

S R Grading, Inc.
1710 Hood Road
Greer, SC 29650
864-877-0154
Contact: Chuck Harvey

Hensons Inc.
Simpsonville, SC
828-859-5836
Contact: Ellis Fincher

The three primary burning methods are open burning, air curtain pit burning, and incineration. Controlled open burning is a cost-effective method for reducing clean woody debris in rural areas. Burning reduces the volume by 95%, leaving only ash residue to be disposed of. Air curtain pit burning substantially reduces environmental concerns. The blower unit must have adequate air velocity to provide a "curtain effect" to hold smoke in and to feed air to the fire below. Portable incinerators use the same methods as air curtain pit systems. The only difference is that portable incinerators utilize a pre-manufactured pit in lieu of an onsite constructed earth/limestone pit.

Metals, wood, and soils are prime candidates for recycling. Most of the non-ferrous metals are suitable for recycling. Specialized contractors are available to bid on disposal of debris by recycling if it is well sorted.

Environmental Monitoring Program

Greg Smith, Anderson County Environmental Services Director will be responsible for ensuring the appropriate Environmental Monitoring Program / Site Closure procedures are establishment and implemented to include necessary planning, permitting and associated requirements in coordination with appropriate local, State, and Federal agencies.

Environmental Controls:

Environmental controls are essential for all incineration methods, and the following will be considered.

1. A setback of at least 1,000 feet will be maintained between the debris piles and the incineration area. At least 1,000 feet will be kept between the incineration area and the nearest building. Fencing and warning signs will be used to keep the public away from the incineration area.

2. The fire will be extinguished approximately two hours before anticipated removal of the ash mound. The ash mound will be removed when it reaches 2 feet below the lip of the incineration pit.

3. The incineration pits will be constructed with limestone and reinforced with earth anchors of wire mesh to support the weight of the loaders. There will be a 1-foot impervious layer of clay or limestone on the bottom of the pit to seal the ash from the aquifer.

4. The ends of the pits will be sealed with dirt or ash to a height of 4 feet.

5. A 12-inch dirt seal will be placed on the lip of the incineration pit area to seal the blower nozzle. The nozzle will be 3-6 inches from the end of the pit.

6. There will be a 1-foot high, unburnable warning stops along the edge of the pit's length to prevent the loader from damaging the lip of the incineration pit.

7. Hazardous or contaminated ignitable material will not be placed in the pit. This is to prevent contained explosions.

8. The airflow will hit the wall of the pit about 2 feet below the top edge of the pit, and the debris should not break the path of the airflow except during dumping.

9. The pit will be no longer than the length of the blower system, and the pit should be loaded uniformly along the length.

SITE REMEDIATION

During the debris removal process and after the material has been removed from each of the debris sites, environmental monitoring will be needed to close each of the sites. This is to ensure that no long-term environmental contamination is left on the site. The monitoring will be done on three different media: ash, soil, and groundwater. The monitoring of the ash will consist of chemical testing to determine the suitability of the material for landfilling. Monitoring of the soils will be by portable methods to determine if any of the soils are contaminated by volatile hydrocarbons. The monitoring of the groundwater will be done on selected sites to determine the probable effects of rainfall leaching through either the ash areas or the stockpile areas.

ENVIRONMENTAL RESTORATION

Stockpiled debris will be a mix of woody vegetation, construction material, household items, and yard waste. HHW and medical wastes will be segregated and removed prior to stockpiling. Activities at the debris disposal sites will include anyone or a combination of the following activities: stockpiling, sorting, recycling, incineration, grinding, and chipping. Incineration will be done in air curtain pits and generally only woody debris will be incinerated; however, the efficiency of the incineration and the quality of incineration material is highly variable. Contamination may occur from petroleum spills at staging and reduction sites or runoff from the debris piles, incineration sites, and ash piles.

SITE CLOSE-OUT PROCEDURES

If utilized each temporary debris staging and reduction site will eventually be emptied of all material and be restored to its previous condition and use.

Before activities begin ground and aerial photos will be taken, important features such as structures, fences, culverts, and landscaping will be noted. Random soil samples will be taken as well as water samples from existing wells. The site will be checked for volatile organic compounds.

After activities begin, constant monitoring of air quality and soil and water samples will take place. Photos, maps, and sketches of the site will be updated and fuel spills will be noted.

At close out final testing of soil, water, and air quality will be taken and compared to original conditions. All ash will be removed and remediation actions will be taken as needed.

Quality assurance inspectors will monitor all closeout and disposal activities to ensure that contractors, if used, complied with contract specifications.

Additional measures may be necessary to meet local, State and Federal environmental requirements because of the nature of the staging and reduction operation. The basic close-out steps are to remove all debris from the site; conduct an environmental audit or assessment; develop a remediation or restoration plan approved by the appropriate environmental agency; execute the plan; get acceptance from the landowner; and terminate lease payments, if applicable.

V. Contracted Services

A. Emergency Contracting/Procurement Procedures

CONTRACTING PROCEDURES

Contracting for labor and equipment may be necessary if the magnitude of the emergency debris clearance, removal and disposal operation is beyond the capabilities of the local force account resources; State resources, mutual aid agreements and volunteer labor and equipment. The Debris Manager will be familiar with contracting procedures for he/she will be required to define specific debris removal tasks and recommend specific contract types based on the magnitude of the debris clearance, removal and disposal operation and the site clearance and restoration requirements. The Emergency Management Director has the responsibility for the Anderson County Council for developing, processing and administering debris clearance, removal and disposal contracts.

General contract provisions, qualification requirements and solicitation of contracts include but are not limited to the following:

1. Determine the type and method of contracting needed to satisfy specific debris clearance, removal and disposal requirements of an unusual and compelling urgency.
2. Solicit bids, evaluate offers, award contracts and issue notices to precede with all contract assignments.
3. Supervise the full acquisition process for service and supply contracts and the oversight of contract actions to ensure conformance to regulatory requirements.
4. Coordinate with the Solid Waste Manager, Transportation Director, and the Debris Manager.

B. Debris operations to be outsourced

The County of Anderson will be responsible for managing the debris contract from project inception to completion. Managing the debris contract includes such things as monitoring of performance, contract modifications, inspections, acceptance, payment, and closing out of activities. Should Anderson County decides to award contracts for debris removal the County:

1. Will not allow contractors to make eligibility determinations; as they have no authority to do so.
2. Will utilize pre-negotiated contracts if available. Will utilize formal competitive bid procedures when time permits. If time does not permit for normal competitive procedures, competitive bids still may be obtained using a reduced time frame for submittal for bids. Will request copies of references, licenses, and financial records of unknown contractors.
3. Will document procedures used to obtain contractors.

4. Will not accept contractor-provided contracts without close review. If necessary will request FEMA provide technical assistance on contracts and contract procedures.

TYPES OF DEBRIS CONTRACTS: General three types of contracts that may be used for debris operations.

1. ***Time and Materials*** Contracts may be used for short periods of time immediately after the disaster to mobilize contractors for emergency removal efforts. They must have a dollar ceiling or a not-to-exceed limit for hours, and should be terminated when this time limit is reached. Such contracts will be limited to 70 hours of actual work. The contract will state that (a) the price for equipment applies only when the equipment is operating, (b) the hourly rate includes the operator, fuel, maintenance, and repair, (c) the community reserves the right to terminate the contract at its convenience, and (d) the community does not guarantee a minimum number of hours.

2. ***Unit Price Contracts*** are based on weights (tons) or volume (cubic yards) of debris hauled, and may be used when scope-of-work is not well defined. Unit price contracts require close monitoring of pick-up, hauling, and dumping to ensure that quantities are accurate.

3. ***Lump Sum Contracts*** establish the total contract price using a one-time bid from the contractor. Will only be used when the scope of work is clearly defined, with areas of work and quantities of material are clearly defined. Lump-sum contracts may be defined in one of two ways: (1) area method where the scope of work is based on a one time clearance of a specified area; and (2) pass method where the scope of work is based on a certain number of passes through a specified area.

The County of Anderson has further identified certain volunteer (VOAD), State and Federal agencies ready to assist. These agencies include Civic Clubs, Church organizations, Salvation Army, State Department of Transportation, National Guard, scrap dealers, and U.S. Department of Labor. These VOAD organizations will be coordinated by the State.

VI. Private Property Demolition and Debris Removal

Anderson County Transportation Division will be responsible for removing debris from the public right-of-way. Only when pre approved and it is deemed in the public interest will County Transportation Division remove debris from private property. County Transportation Division will further stage equipment in strategic locations, if necessary, to protect the equipment from damage, preserve the decision maker's flexibility for

employment of the equipment, and allow for the clearing crews to begin work immediately after the disaster. Because of the limited quantity of resources and service commitments following the disaster, the county will be relying heavily on private contractors to remove, collect, and manage debris for reuse, resource recovery, reduction, and disposal.

Debris located on private property is the responsibility of the owner. Long Term Recovery Operations will provide information to Private and Business owners as to any assistance they may qualify for under the FEMA Individual Assistance Program which will be made available after resolving any of their insurance providers' coverage in the event of a Presidential Declared Disaster which includes Public Assistance.

Private Property Debris Removal

1. If Temporary Debris Storage and Removal Sites are established the debris manager and/or the public information officer will publish these locations along with times of operation, types of debris accepted and private property owner will be advised to transport to the nearest TDSR collection site.

2. Dumping debris on public right of way or on property owned by others is illegal and will be aggressively enforced by the Anderson County Solid Waste Manager / Anderson County Enforcement Office.
3. FEMA Public Assistance (PA) funds may be used for demolition and removal of resulting debris under the authority of Section 403, Essential Assistance, of the Stafford Act. This section allows for the demolition of unsafe structures that pose and immediate threat to life, property, or public health and safety. The primary responsibility for demolition of unsafe structures lies with the owner whether it is private or government owned property. Dangerous structures will be the responsibility of the owner to demolish to protect the health and safety of adjacent residents. However, if unsafe structures remain because of the lack of insurance, absentee landlords, or under-staffed and under-equipped local governments. Consequently, demolition of these structures may become the responsibility of the County. The debris manager will be responsible for taking any appropriate action regarding Dangerous Structure Demolition.

VII. Public Information Plan

A. Public Information Officer

The Public Information Officer will develop a proactive public information management plan in order to facilitate cleanup and removal. Emphasis will be placed on actions the public can perform to expedite the cleanup process by separating burnable and non-

burnable debris, segregating household hazardous waste; placing debris at the curbside; keeping debris piles away from fire hydrants and valves, reporting locations of illegal dump sites or incidents of illegal dumping and segregating recyclable materials.

B. Pre-scripted information

The Public Information Officer (PIO) will keep the public informed of debris pick-up schedules, disposal methods and ongoing actions to comply with State and Federal Environmental Protection Agency (EPA) regulations, disposal procedures for self-help and independent contractors, and restrictions and penalties for creating illegal dumps. The Public Information Officer (PIO) will respond to questions pertaining to debris removal from the press and local residents. The following questions are likely to be asked:

- What is the pick-up system?
- When will the contractor be in my area?
- Who are the contractors and how can I contact them?
- Should I separate the different debris materials and how?
- How do I handle Household Hazardous Waste?
- What if I am elderly?

C. Distribution plan

See News Media fax list (Appendix: S).

Appendices

Appendix A: Emergency Key Points of Contacts & Information
Appendix B: Anderson County Debris Management Task Force (DMTF)
Appendix C: Debris Estimation Charts
Appendix D: Pre-identified TDM Sites in Anderson County
Appendix E: TDM Site Preparation Check List
Appendix F: Existing Landfills (Servicing Anderson County)
Appendix G: Table of Pre-identified TDSR Sites
Appendix H: Emergency Disposal of Debris Resulting from Natural Disasters
Appendix I: Guidelines for Open Burning of Natural Disaster Debris
Appendix J: Eligibility of Curbside Pick-Up (Job Aid)
Appendix K: Removal of Eligible Debris from Private Property (Job Aid)
Appendix L: Right of Entry Permit – Private Property
Appendix M: Emergency Operation Routes
Appendix N: Recycling Vendors Point of Contact
Appendix O: Hazardous Waste Vendor Point of Contact
Appendix P: FEMA Fact Sheet "Eligibility of Hazardous Stump Removal
Appendix Q: Daily Haul Record/Load Ticket
Appendix R: Municipality Public Works Point of Contacts

Appendix A
Emergency Key Points of Contact

NAME	DEPT	Work Phone	Cell phone	Home Phone	
Taylor Jones	EPD	260-4646			
Holt Hopkins	Transportation	260-4000			
Greg Smith	Solid Waste	260-1001			
Ike Brissey	EPD	260-4646			
Dean Brown	Solid Waste	260-1001			
Elaine Rollins	Solid Waste	260-1001			
Jay Patterson	Solid Waste	260-1001			
Mark McConnell	Transportation	260-4000			
Tony Owens	Transportation	260-4000			
Tommy Whitaker	Starr Landfill	260-1001			

Appendix B
Anderson County Debris Management Task Force

NAME	DEPT	Work Phone	Cell Phone	Home Phone	
Jay Patterson	Solid Waste	260-1001			
Dean Brown	Solid Waste	260-1001			
Mark McConnell	Starr Landfill	260-1001			
Tommy Whitaker	Transportation	260-4000			
Tony Owens	Transportation	260-4000			
Chip Sturgis	Public Info Off	260-4646			
Stacy Pressley	EMS Finance	260-4646			
James McAdams	EMS Planning	260-4646			

Appendix C
Debris Estimation Chart

"U.S. Army Corps of Engineers Hurricane Debris Estimating Model"

Background

- **The U.S. Army Corps of Engineers (USACE) Emergency Management staff has developed a modeling methodology designed to forecast potential amounts of hurricane-generated debris.**
- **Based on actual data from Hurricanes Frederic, Hugo and Andrew.**
- **The estimated quantities produced by the model have a predicted accuracy of +/- 30%.**
- **The primary factor used by the model is the number of households in a developed urban/suburban area.**
- **Other factors utilized are:**
  - **Cubic yards of debris generated per household per storm category**
  - **Vegetative cover.**
  - **Commercial density.**
  - **Precipitation.**
- **Household debris includes damage to the house, contents and surrounding shrubs/trees.**
- **Vegetative cover includes all trees and shrubbery located along public rights-of-way, parks and residential areas.**
- **Commercial density includes debris generated by damage to businesses and industrial facilities.**
- **Private contractors will remove the majority of commercial related debris; however, disposal/reduction space is still required.**
- **Very wet storms will cause ground saturation, increasing tree fall.**

Initial Planning Data

- **For planning purposes, the worst - case scenario should be used for the subject area.**
- **The most accurate process is to determine the defined areas by using Doppler Radar (National Weather Service Broadcasts) and Geographical Information Systems (GIS).**
- **Doppler radar will define the storm's intensity and the exact track of the eye of the storm in relation to the affected area.**
- **Track the storm and plot the eye path and 5-mile wide bands out from the eye to define area and estimate wind speeds.**
- **The wind speed of the eye wall normally determines the reported storm category with the outward or 5-mile bands being a lesser category.**
- **Track the storm inland until the wind speeds dissipate below hurricane strength.**
- **Divide outlined areas by storm category.**

- **Enter coordinates into a GIS database to determine areas and demographic information, such as:**
  - **Population; Schools; Businesses.**

Appendix C

Debris Estimation Chart: Continued

STEP 1 – ESTIMATING DEBRIS QUANTITIES

The formula used in this model will generate debris quantity as an absolute value based on a known/estimated population or a debris quantity per square mile based upon population density per square mile:

- **Determine population (P) in the affected area.**
  - **For example, 2000 census data for Anderson County, SC, is 85, 231.**
  - P = 85, 231
  - **The assumption of** 3 persons per household (H) **is used for this model.**
  - **Known/estimated population** (P) **for a jurisdiction may be used to determine a value for** H **or** H = P/3.

EXAMPLE

A category 4 storm passes through Anderson County, SC. The area is primarily single family dwellings with some apartment complexes, schools, and shopping centers. Vegetation characteristic is heavy because of the proliferation of residential landscape shrubbery and trees throughout the area. The storm is very wet, with rain before and continuing for a few days after the hurricane.

FORMULA: Q = H(C)(V)(B)(S)

H = P/3 = 85,231/3 = 28,410 (3 person per household)

C = 50 (Factor for a Category 4 storm)

V= 1.5 (Multiplier for heavy vegetation)

B = 1.3 (Multiplier for heavy commercial due to schools/stores/apartment)

S = 1.3 (Multiplier for wet storm event)

Then Q = 28, 410 x 50 x 1.5 x 1.3 x 1.3 = 3,600,967 cubic yards of debris or 3.6 million cy

Appendix C

Debris Estimation Chart: Continued

The Model Formula: Q = H (C)(V)(B)(S) Where:

Q **is the quantity of debris in cubic yards.**
H **is the number of households.**
C **is the storm category factor in cubic yards**
V **is the vegetation characteristic multiplier**
B **is the commercial/business/industrial use multiplier.**
S **is the storm precipitation characteristic multiplier.**

C **is the storm category factor as shown below. It expresses debris quantity in cubic yards (cy) per household by hurricane category and includes the house and its contents, and land foliage.**

Hurricane Category	Value for "C" Factor
1	**2 cy**
2	**8 cy**
3	**26 cy**
✓ 4	✓ 50 cy
5	**80 cy**

V **is the vegetation multiplier as shown below. It acts to increase the quantity of debris by adding vegetation, including shrubbery and trees, on public rights-of-way.**

Vegetative Cover	Value of "V" Multiplier
Light	**1.0**
Medium	**1.2**
Heavy	1.3

B **is the multiplier that takes into account areas that are not solely single-family residential, but includes small retail stores, schools, apartments, shopping centers, and light industrial/manufacturing facilities. Built into this multiplier is the offsetting commercial insurance requirement for owner/operator salvage operations.**

Commercial Density	Value of "B" Multiplier
Light	**1.0**
Medium	**1.2**
Heavy	1.3

S **is the precipitation multiplier that takes into account either a "wet" or "dry" storm event. A "wet" storm for category 3 or greater storms will generate more vegetative debris due to the uprooting of complete trees.**

Precipitation Characteristic	Value of "S" Multiplier
None to Light	**1.0**
Medium to Heavy	1.3

Note: Steps 2 and 3 of this model can also be applied to other debris generating events once an estimated quantity of debris is established.

Appendix C

Debris Estimation Chart: Continued

STEP 2 – DEBRIS STORAGE SITE REQUIREMENTS

- **Estimate debris pile stack height of 10-feet.**
- **60% usage of land area to provide for roads, safety buffers, burn pits and household**

hazardous waste.

1 acre (ac) = 4,840 square yards (sy)
10 foot stack height = 3.33 yards (y)
total volume per acre = 4,840 sy/ac x 3.33 y = 16,117 cy/ac

From the example above, the acreage required for debris reduction site is: 7,000,000/16,117 cy/ac = 434 acres (required for debris storage only, no buffers, etc.)

To provide for roads and buffers, the acreage must be increased by a factor of 1.66.

434 ac x 1.66 = 720 acres or, since on square smile (sm) = 640 acres 720ac/640as/sm = 1.12 sm.

- **If you assume a 100 acre storage site can be cycled every 45 to 60 days or one time during the recovery period, then 720/2 = 360 ac or four 100 acre sites would be required.**

- **The number of sites varies with:**
  - **Size**
  - **Distance from Source**
  - **Speed of reduction (mixed debris is slower than clean woody debris).**
  - **Removal Urgency**

Appendix C

Debris Estimation Chart: Continued

STEP 3 – CATEGORIES OF DEBRIS

Debris removed will consist of two broad categories:

- **Clean wood Debris.**
- **Construction and demolition (C & D) debris.**

- The clean debris will come early in the removal process as residents and local governments clear yards and rights of way.
- The debris removal mission can be facilitated if debris is segregated as much as possible at the origin along the right-of-way, according to type.
- The public should be informed regarding debris segregation as soon as possible after the storm.
- Time periods should be set for removal, the first 7-10 days clean woody debris only, then followed by other debris, with the metals segregated from non-metals.
- Most common hurricane-generated debris will consist of the following:
  1. **30 % Clean woody debris**
  2. **70 % Mixed C & D**
  - Of the 70% mixed C & D
    - **42 % Burnable but requires sorting**
    - **5 % Soil**
    - **15 % Metals**
    - **38 % Land filled**

Based upon the above, 7,000,000 cy of debris would break down as follows:

2,100,000 cy Clean woody debris
4,900,000 cy is metals, and 1,862,000 cy is Land filled.

Burning will produce about 95 % volume reduction

Chipping and grinding reduce the debris volume on a 4-to-1 ration (4 cy is reduced to 1 cy) or by 75 %.

The rate of burning is basically equal to the rate of chipping/grinding, about 200 cy/hr. However, chipping requires on-site storage and disposal of the chips/mulch.

Note: Appendix C information was taken from FEMA Publication 325, April 1999).

Appendix C

Debris Estimation Chart: Continued

Public Assistance Debris Operations Job Aid (FEMA 9580.1)

Section E: Estimating Debris Quantities

Estimating Debris Quantities

General**: Initial quantity estimates are difficult to make, due to a number of factors: the type, magnitude, and geographical location of the disaster; geographical extent of the debris; the types and mix of debris, and the sometimes difficulties in gaining access to the affected area. It is important, however, to make as accurate an estimate as possible, and refine that estimate as work continues.**

Become familiar with the general results of various types of disasters. Hurricanes, and tornadoes can produce large quantities of yard waste and construction materials scattered over a large area. Floods create large amounts of debris that may be buried in silt. Ice storms and snowstorms create large amounts of woody debris from broken limbs and branches. Many of the large broken limbs remain attached to the tree trunk and must be removed by professional tree trimmers.

Ensure that necessary equipment is available, including:

- **Digital (preferred) or Polaroid camera. (Disposable Cameras)**
- **100 foot tape or roll-off wheel**
- **Calculator, notepad, sketchpad**
- **Maps of area**
- **Aerial photographs (preferably before and after the disaster)**
- **Dedicated vehicle and mobile communications**

Debris estimating can be expedited by dividing the community into sectors based on any of the following:

- **Types of debris; woody, mixed or construction material**
- **Location of debris; residential, commercial or industrial**
- **Land use; rural or urban**

Reminders: **The following reminders may be of assistance when performing debris estimates:**

- **Look beyond the curb into side and backyards and at the condition of the homes. Most of the debris in these areas will eventually move to the curb.**
- **Wet storms will produce more personal property (household furnishings, clothing, rugs, etc.) debris if roofs are blown away.**
- **Look for hanging debris such as broken limbs after an ice storm.**
- **Flood-deposited sediment may be compacted in place. Volume may increase as debris is picked up and moved.**
- **Using aerial photographs in combination with ground measurements will help determine if there are any voids in the middle of large debris piles.**
- **Treat debris piles a s a cube, not a cone, when performing estimates.**

Appendix C

Debris Estimation Chart: Continued

Public Assistance Debris Operations Job Aid (FEMA 9580.1)

Section E: Estimating Debris Quantities

Estimating Aids – Building: **The following information will assist you in determining the amount of debris from destroyed buildings and mobile homes:**

- **<u>One Story House Formula:</u>**

  L' x W' x 8' = _____cubic yards x 0.33 = _____cubic yards of debris. 27' per cy
  (The 0.33 factor accounts for the "air space" in the house)

- **The table below can be used to estimate debris quantities for a totally destroyed typical home. A vegetative debris multiplier is also included.**
- **Amount of personal property (as debris) from average flooded residence without a basement: 25-30 cy.**
- **Amount of personal property (as debris) from average flooded residence with a basement: 45-50 cy.**

Typical House	VEGETATIVE COVER MULTIPLIER (YARD WASTE)			
(Square Feet)	None	Light (1.1)	Medium (1.3)	Heavy (1.5)
1000 SF	**98 cy**	107 cy	**127 cy**	147 cy
1200 SF	**118 cy**	129 cy	**153 cy**	177 cy
1400 SF	**137 cy**	150 cy	**178 cy**	205 cy
1600 SF	**155 cy**	170 cy	**201 cy**	232 cy
1800 SF	**175 cy**	192 cy	**228 cy**	263 cy
2000 SF	**195 cy**	215 cy	**254 cy**	293 cy
2200 SF	**215 cy**	237 cy	**280 cy**	323 cy
2400 SF	**235 cy**	259 cy	**306 cy**	353 cy
2600 SF	**255 cy**	280 cy	**332 cy**	383 cy

- **Single wide mobile home = 290 cy of debris**
- **Double wide mobile home = 415 cy of debris**

Rule of Thumb:

- 15 trees 8 inches in diameter = 40 cy (average)
- Root system (8'-10' diameter) = Requires one flat bed trailer to move.
- To convert cubic yards of Construction and Demolition (C & D) debris to tons, divide by 2.
- To convert tons of C & D debris to cubic yards, multiply by 2.
- To convert cubic yards of woody debris to tons, divide by 4*.
- To convert tons of woody debris to cubic yards, multiply by 4*.

*These factors to convert woody debris from cubic yards to tons, and vice versa, is considered a good average for mixed debris, developed by the USACE.

Appendix C

Debris Estimation Chart: Continued

Public Assistance Debris Operations Job Aid (FEMA 9580.1)

Section E: Estimating Debris Quantities

Debris Composition for Hurricanes: **As a general statement, hurricanes are the biggest debris generators of all disasters. For planning purposes, it is sometimes useful to have an estimate of the composition of the debris expected from a hurricane. There is no exact composition data; the mix from Hurricane Andrew in Florida was generally 30% clean, woody debris and 70% construction and demolition debris . After Hurricane Fran in North Carolina, the mix was reversed – clean woody debris was 70%. Look closely at the areas impacted by the hurricane before projecting the mix. One type of debris that has a fairly consistent composition is mixed construction and demolition debris. A good average for that mix is:**

- **42% burnable, but requires sorting (Check before burning, there may be prohibitions against burning construction debris).**
- **5% soil.**
- **15% metals.**
- **38% Landfilled.**

Reduction Rates:

- **Burning: 95% reduction.**
- **Chipping and grinding: 75% reduction (average). This percentage may vary with the types of wood being chipped. It is best to carefully measure several piles of typical woody debris before they are chipped, then immediately thereafter, measure the amount of mulch generated. Palm trees normally are not chipped because of their fibrous trunks and the high content of silicates that are carried up the trunks during intake of moisture.**
- **Tub-grinders have production rates ranging from 160 to 340 cubic yards per hour for brush and yard waste. Check production rates for specific equipment being used. Don not use Grinder Production Logs: they tend to over quantify production because they may apply engine hours, use an "ideal" rate of production; lack personnel to monitor equipment usage; have changes in conditions of debris, etc. Verify by monitoring operations.**

Appendix D
Pre-identified TDM Sites in Anderson County

The following is a list of temporary holding sites: map locations attached.

1. King David Convenience Center, 299 Echo Circle, Anderson.
2. White Plains Convenience Center, 3520 Hwy 29 North, Belton.
3. Harris-bridge Road Convenience Center, 1328 Harris Bridge Road, Anderson.
4. Anderson Regional MRF Center,104 Landfill Road, Belton.
5. Townville/Forks Convenience Center, 399 Simmons Ford Road, Townville.
6. Craytonville Convenience Center, 200 Wilson Road, Belton.
7. Carswell Convenience Center, 110 Audubon Place, Iva.
8. Friendship/Shady Grove Convenience Center, 159 Corner Road, Belton.
9. Slabtown/3&20 Convenience Center, 1299 3&20 Road, Easley.
10. Jockey Lot/Whitefield Convenience Center, 399 Big Wood Road, Belton.
11. Agnew/Mountain Creek Convenience Center, 2505 Agnew Road, Anderson.
12. Generostee/Parker Bowie Convenience Center, 1300 Old Bell Road, Iva.
13. Civic Center Convenience Center, 3024 Mall Road, Anderson.
14. White Street Convenience Center, 2151 White Street Extension, Anderson.
15. Pendleton Landfill, Mill Division Road, Pendleton.

Appendix E
TDM Site Preparation Checklist

SITE EVALUATION

1. **Site Ownership:**
   - **a) Use public lands to avoid costly leases and trespassing allegations. Use private land only if public sites are unavailable.**

2. **Site Location:**
   - **a) Consider impact of noise, dust and traffic;**
   - **b) Consider pre-existing site conditions;**
   - **c) Look for good ingress/egress at site(s);**
   - **d) Consider impact on ground water;**
   - **e) Consider site size based on:**
     - **(1) Expected volume of debris to be collected;**
     - **(2) Planned volume reduction methods;**
   - **f) Avoid environmentally sensitive areas, such as:**
     - **(1) Wetlands;**
     - **(2) Rare and critical animals or plant species;**
     - **(3) Well fields and surface water supplies;**
     - **(4) Historical/archaeological sites;**
     - **(5) Sites near residential areas, schools, churches, hospitals and other sensitive areas;**
   - **g) Perform recordation of site chosen (pictures, videos).**

3. **Site Operations:**
   - **a) Use portable containers;**
   - **b) Separate types of waste as operations continue;**
   - **c) Monitor site at all times;**
   - **d) Perform on-going volume reduction (on site or removal for disposal/reduction);**
   - **e) Provide nuisance management (dust, noise, etc.);**
   - **f) Provide vector controls (rats, insects, etc);**
   - **g) Provide special handling for hazardous materials;**
   - **h) Provide security (limit access);**
   - **i) Ensure appropriate equipment is available for site operations.**

4. **Site Closeout:**
   - **a) Remove all remaining debris to authorized locations;**
   - **b) Restore site to pre-use condition;**
   - **c) Perform recordation of site (pictures, videos);**
   - **d) Ensure compliance with ADEM Guidelines.**

Appendix F
Table 1 of 3
Existing Municipal Solid Waste Landfills
(Servicing Anderson County)

Name	Location	Owned By	Operated By	Permit Number	Permitted capacity
Anderson Regional	Belton	Waste Management	Waste Management		
Material Recovery	Belton	Waste Management	Waste Management		

NOTE:

Appendix F
Table 2 of 3
Existing Industrial Landfills
(Located in or Servicing Anderson County)

Name	Location	Owned By	Operated By	Permit Number	Permitted capacity

Appendix F
Table 3 of 3
Existing C & D Landfills
(Located in or Servicing Anderson County)

Name	Location	Owned By	Operated By	Permit Number	Permitted capacity
Starr C & D	Starr	Anderson	Anderson		26,000tons

Appendix G
Table of Pre-identified TDSR Sites

The following is a list of temporary holding sites: map locations attached.

1. King David Convenience Center, 299 Echo Circle, Anderson.
2. White Plains Convenience Center, 3520 Hwy 29 North, Belton.
3. Harris-bridge Road Convenience Center, 1328 Harris Bridge Road, Anderson.
4. Anderson Regional MRF Center,104 Landfill Road, Belton.
5. Townville/Forks Convenience Center, 399 Simmons Ford Road, Townville.
6. Craytonville Convenience Center, 200 Wilson Road, Belton.
7. Carswell Convenience Center, 110 Audubon Place, Iva.
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11. Agnew/Mountain Creek Convenience Center, 2505 Agnew Road, Anderson.
12. Generostee/Parker Bowie Convenience Center, 1300 Old Bell Road, Iva.
13. Civic Center Convenience Center, 3024 Mall Road, Anderson.
14. White Street Convenience Center, 2151 White Street Extension, Anderson.
15. Pendleton Landfill, Mill Division Road, Pendleton.

Appendix H

Department of Environmental Management
"Emergency Disposal of Debris Resulting From Natural Disaster"

Plots of land may be used for the emergency disposal of debris created during natural disasters that, due to the amount of waste generated, would overwhelm the existing capacity of permitted landfills. The following guidelines shall apply:

- **Application for use of a site, not permitted by DHEC, for emergency disposal of debris must be submitted by a unit of local or state government.**

- **Sites to be used only for the staging of waste do not need the approval of DHEC prior to their use.**

- **Sites to be used only for the open burning of waste do not need the approval of DHEC prior to their use, as long as the DHEC guidelines for open burning of natural disaster debris are followed. Prior to closing the burn site, the operator of the site must conduct a hazardous waste determination on the ash resulting from open burning and submit that to the DHEC Industrial Hazardous Waste Branch. DHEC will make a determination if the ash can remain at the site or must be removed from the site. If ash is left at the site, it shall be covered with a minimum of six (6) inches of soil and a vegetative cover must be established. If ash is removed from the site, it must be taken to a permitted landfill as approved by DHEC.**

- **If regulated solid waste or ash from open burning are disposed of at the site, a deed notation must be recorded in the County records for the site within 90 days after the site discontinues receiving waste, stating that solid waste has been dispensed of on the site. The site must be surveyed by a registered land surveyor and the results of the survey recorded in the deed.**

- **Sites to be used for disposal of regulated solid waste are to be approved by DHEC prior to their use. The actual location of the site must be submitted to DHEC, along with any information that may be known about the site, such as proximity to residences, proximity to drinking water wells and wetlands, surface water bodies and streams. If the site is located within the 10-foot coastal zone, coordination with Field Operations Division must be done prior to approval.**

- **No hazardous waste or putrescible waste may be disposed of in these sites.**

- **Waste shall not be placed in groundwater if the site is excavated. Waste shall not be placed in wetlands.**

- **The disposal site must be closed in accordance with DHEC regulations for closure of a permitted construction/demotion landfill. Unless the site was used only for disposal of ash resulting from open burning. For sites where regulated solid waste was disposed, the owner of the property will be required to conduct post-closure care of the site for a period of time, to be determined by DHEC based on the types of waste disposed of and the location of the site, up to 30 years after the site is closed.**

- **The entity responsible for the disposal site must report to the DHEC Solid Waster Branch once per month the activities that have occurred at the site for the previous month. DHEC will specify what is to be reported on a case-by-case basis.**

- **The use of a site in an emergency situation does no imply that DHEC will approve the site as a permitted landfill.**

Appendix I

SC Department of Health and Environmental Control
http://www.scdhec.net/environment/admin/htm/permtype.htm
Environmental Permitting
Solid Waste Landfills

General Permit for Land-Clearing Debris: John McCain, (803) 896-4067
C & D: John McCain, (803) 896-4067
Municipal Solid Waste: John Schnabel, (803) 896-4216
Solid Waste Transfer Station: Terry Davenport, (803) 896-4219
Yard Trash (Composting & Chip/Shred): Johnny Schnabel, (803) 896-4216

"Guidelines for Open Burning of Natural Disaster Debris"

These guidelines apply to the open burning of debris resulting from catastrophic natural events.

- **Only vegetation and wood may be burned. All other materials should be disposed of by burial in a permitted landfill or a site approved by Anderson County for disposal.**
- **Open burning, including approval of sites, must be coordinated and supervised by county officials (public health officers, county engineer, solid waste coordinators, emergency management officials). A municipality may conduct and supervise its own open burning, following these guidelines, after approval by a county official.**
- **If a burn site is located in a county in which a Fire Alert from the South Carolina Forestry Commission is in force, the location of the site must be telephonically given to the regional office of the South Carolina Forestry Commission.**
- **Open burning sites should be as distant as possible from occupied dwellings and businesses. Recommended minimum distance is 1000 feet.**
- **Material to be burned should be as dry as possible. Larger piles consume the debris faster during combustion.**
- **Open burning should be conducted during clear weather, preferably days with sunshine.**
- **Burning may commence or fuel added to a fire between 8:00 a.m. and 3:00 p.m..**
- **The use of portable air curtain incinerators is encouraged and should be considered if one or more of the following situations exist:**
  - **Extended 24-Hour burning is necessary**
  - **Accelerated burning is desired**
  - **Smoke is or may become a problem**
- **Prior to closing the burn site, the operator of the site must conduct a hazardous waste determination on the ash resulting from open burning and submit that to the South Carolina Industrial Hazardous Waste Branch. SCIHWB will make a determination if the ash can remain at the site or must be removed from the site. If ash is left at the site, it shall be covered with a minimum of six inches of soil and a vegetative cover must be established. If ash is removed from the site, it must be taken to a permitted landfill as approved by SCDHEC.**
- **If ash from open burning or regulated solid waste are disposed of at the site, a deed notation must be recorded in the County records for the site within 90 days after the site discontinues receiving waste, stating that solid waste has been disposed of on the site. The site must be surveyed by a registered land surveyor and the results of the survey recorded in the deed.**
- **Open burning shall not occur at a permitted landfill unless approved by the Anderson Solid Waste Manager. Contact the Solid Waste Manager at 864-260-1001 for details.**
- **Anderson Solid Waste Manager has the authority to halt or modify any open burning of disaster debris, POC contact for open burning is Greg Smith, Solid Waste Manager, telephone number 864-260-1001.**

Appendix J

Eligibility of Curbside Pick - Up

Public Assistance Debris Operations Job Aid (FEMA 9580.1)

Eligibility of Curbside Pick-Up

Debris may continue to accumulate as residents bring debris from their properties to public rights-of-way. Typically, this occurs in three stages:

Stage 1: **Woody Debris and yard waste moved to right-of-way.**

Stage 2: **Household waste, such as damaged personal goods, moved to right-of-way.**

Stage 3: **Construction and demolition materials removed by the homeowner prior to the receipt of insurance and individual assistance payments.**

Residents should not mix garbage with debris. Debris deposited at the curbside must be disaster-related to be eligible for pickup and disposal by the applicant. Applicants should resume normal garbage pick-up schedules as soon as possible.

Construction and demolition materials from minor or major repairs or reconstruction by contractors should not be deposited at the curbside. Contractors should remove and deposit the debris at approved landfills.

Insurance proceeds usually cover the cost for demolition debris removal from private property. Remember, only disaster-related debris removal costs not covered by insurance are eligible for reimbursement. Watch for non-disaster related materials (bagged grass clippings, household garbage, automobile parts etc.).

When it becomes apparent that the debris being brought to the curb is not disaster-related, or is reconstruction debris, the Public Assistance Officer (PAO-FEMA) should negotiate with the State counterpart to set a realistic deadline and make sure the applicants have advance notice. *Note: The Anderson County Transportation Director in conjunction with the Solid Waste Manage should evaluate this cut-off point first, and issue a notice to the public announcing the cut off date.*
For example, it is unrealistic to impose a deadline that takes effect 48 hours later. For large events, it is unrealistic to set deadlines immediately following the disaster. However, discussions with the State on the need to establish deadlines should begin early.

Remember, the time extension authority given to the State applies only to disaster-related debris. That authority does not apply to curbside pick-up of non-disaster debris, or to reconstruction debris.

Appendix K

Removal of Eligible Debris from Private Property

Public Assistance Debris Operations Job Aid (FEMA 9580.1)

Removal of Eligible Debris from Private Property

A discussion of eligibility for removal of debris from private property is contained in the Debris Management Guide, FEMA Publication 325; however, issues regarding such removal are common. In particular, problems may arise regarding the definitions of :public health and safety" and "economic recovery" related to debris on private property. Removal of debris from private property is primarily the responsibility of the individual property owner, aided by insurance settlements or volunteer organizations.

- **Ensure that the term "economic recovery of the affected areas" is not being misapplied. Use of this criterion is normally restricted to the removal of disaster-related debris from large commercial areas to expedite restoration of the economic viability of the affected community.**
- **Ensure that all applicants** (Note: Applicants as applied here would be the Anderson County Council for Public Assistance through FEMA) **are aware that only FEMA makes eligibility determinations regarding removal of debris from private property.**
- **Ensure that all applicants are aware of the limitation of debris removal from private property early in the disaster.**
- **If FEMA determines that debris is so widespread that removal from private property is appropriate, ensure that the eligible applicant understands the requirement to collect any insurance proceeds that covers the debris removal. These proceeds must be reported to FEMA, and that amount de-obligated from the appropriate Public Worksheet (PW of the PA application).**
- **Ensure that the determination that " a public health and safety issue exists" is** not **based on building codes. Generally, the determination would be based on ordinances related to condemnation. Additionally, most such ordinances require that the applicant place a lien on the property for re-coupment of demolition and debris removal costs. If so, that amount should be treated similar to insurance proceeds, and de-obligated.**
- **Ensure that there is a clear understanding that a public health and safety hazard must exist for the removal of the debris to be eligible. Again, the final determination for the eligibility of debris removal from private property is a** FEMA **responsibility.**
- **Demolition of a structure is not always the most cost-effective health and safety alternative. For "attractive nuisances," where structural integrity has not been compromised, cleaning and securing the facility may be the best alternative.**
- **Concrete slabs or foundation-on-grade do not present a health or safety hazard to the general public except in very unusual circumstance, such as erosion under a concrete slab on a hillside.**
- **Broken slabs, or slabs incapable of supporting a new structure, do not constitute a public health or safety hazard. They are more appropriately part of the reconstruction of the facility, and concrete slabs that are removed for reconstruction purposes are not eligible for removal as disaster-related debris, even when brought to the curbside.**
- **The cost of removing substantially damaged structures, as well as associated slabs, driveways, fencing, garages, sheds, and similar appurtenances, are eligible when the property is part of a Section 404 Hazard Mitigation buyout and relocation project. Review the *Policy on Demolition of Private and Public Facilities*, November 9, 1999.**

******** D – R – A – F- T C – O – P – Y *********

Appendix L

Anderson County
RIGHT OF ENTRY AGREEMENT
Private Property

I/We_____**, the owner(s) of the property commonly identified as:**
(street)_____,
(city/town)_____**(zip code)**_____,
in Anderson County**, in the** State of South Carolina **do hereby grant and give freely and without coercion, the right of access and entry to said property to the Anderson** County Council, **its agencies, contractors, and subcontractors thereof, for the purpose of removing and clearing any or all storm-generated debris of whatever nature from the above described property.**

It is fully understood that this permit is not an obligation to perform debris clearance. The undersigned agrees and warrants to hold harmless Anderson County, the State of South Carolina, its agencies, contractors, and subcontractors, for damage of any type, whatsoever, either to the above described property or persons situated thereon and hereby release, discharge, and waive any action, either legal or equitable that might arise out of any activities on the above described property. The property owner(s) will mark any storm damaged sewer lines, water lines, and or other utility lines located on the described property.

I/We (have_____, have not_____) (will_____, will not_____) received any compensation for debris removal from any other source including Small Business Administration (SBA), National Resource Conservation Service (NRCS), private insurance, individual and family grant program or any other public assistance program. I will report for this property any insurance settlements to me or my family for debris removal that has been performed at government expense. For the consideration and purposes set forth herein, I set my hand this _____day of _____, 20_____.

Owner**:**_____
Telephone Number: ( )_____**-**_____
Address: (Street) _____
(City, State, Zip Code)_____,_____,_____

Owner**:**_____
Telephone Number: ( )_____**-**_____
Address: (Street) _____
(City, State, Zip Code) _____,_____,_____
Witness**:**_____
(Phone Number)_____
County Representative: **(Signature)** _____
(Phone Number)_____
Department or Contractor
***Name*:**_____

Appendix M

Emergency Routes

1. Roads with an average daily traffic count greater than 5,000 vehicles daily.
2. Roads with an average daily traffic count between 4,000 and 5,000 vehicles daily.
3. Roads with an average daily traffic count between 3,000 and 4,000 vehicles daily.
4. Roads with an average daily traffic count between 2,000 and 3,000 vehicles daily.
5. Roads with an average daily traffic count between 1,000 and 2,000 vehicles daily.
6. Roads with an average daily traffic count less than 1,000 vehicles daily.

Appendix N

Recycling Vendor Point of Contact

***Anderson County would take all of its metal materials to the following company for recycling:**

Carolinas Recycling Group, LLC
428 N. Gossett Street
Anderson, SC 29621
864-225-8731
Contact: Kym J. Cleveland

***Anderson County would contract recycling of its electronic equipment with the following companies:**

Cleanlites Recycling South, Inc.
100 Fine Road
North, South Carolina
803-247-4571
Contact: Steve Strictland

Earth Protection Services, Inc.
102 Twentynine Court
Williamston, SC
864-847-7700
Contact: John Scsott

Appendix O

Hazardous Waste Vendor Point of Contact

***Anderson County would contract recycling of its electronic equipment with the following companies:**

Cleanlites Recycling South, Inc.
100 Fine Road
North, South Carolina
803-247-4571
Contact: Steve Strictland

Earth Protection Services, Inc.
102 Twentynine Court
Williamston, SC
864-847-7700
Contact: John Scsott

Appendix P

FEMA FACT SHEET

"Eligibility of Hazardous Stump Removal"

Date Published: May 16, 2005

This fact sheet provides guidance on the eligibility of extracting, transporting and disposing of hazardous tree stumps and root balls that were created by a disaster event. FEMA will reimburse applicants a reasonable cost on a per stump basis for stumps larger than 24 inches in diameter that are extracted from the public right-of-way. FEMA will reimburse the removal of all other stumps on a cubic yard basis using the attached Stump Conversion Table.

When a disaster event uproots a tree (i.e. 50% of root ball is exposed) on a public right-of-way, improved public property or improved property owned by certain private nonprofit organizations and the exposed root ball poses an immediate threat to life, public health and safety, FEMA may provide supplemental assistance to extract, remove and dispose of the eligible stump and root ball and filling of the root cavity. FEMA will reimburse applicants reasonable costs for extracting, transporting and disposing of eligible stumps and root balls that FEMA, the State and applicant approve in advance using the attached Hazardous Stump Worksheet. FEMA will reimburse applicants for eligible stumps on a per stump basis for stumps larger than 24 inches in diameter (measured two feet from the ground). This recognizes that different equipment may be required to extract, transport and dispose of these sizes of stumps. Stumps with diameters of 24 inches and smaller do not require special equipment to extract, transport and dispose of. Therefore, FEMA will reimburse applicant stumps with diameters of 24 inches and smaller at the unit cost rate for regular debris using the attached Stump Conversion Table. FEMA will not reimburse applicants for stumps and root balls that were not approved in advance.

FEMA will reimburse applicants at the unit cost rate (usually cubic yards) for normal debris removal for all stumps, regardless of size, that are placed on the rights-of-way by others (i.e. contractors did not extract them from public property or property of eligible Private Non Profit organization). In these instances, applicants do not incur additional cost to remove these stumps – the equipment is used to pick up "regular" debris can be used to pick up these stumps. If an applicant believes that it will incur additional costs in removing large stumps from the rights-of-way, it should complete He Hazardous Stump Worksheet and present documentation to FEMA in advance for approval.

FEMA does not consider stumps with less than 50% of their root ball exposed to be hazardous. Therefore, the removal of these stumps is not eligible for reimbursement. FEMA will reimburse applicants the cost to cut the stump at ground level.

This fact sheet clarifies guidance on stumps contained in FEMA 325, dated April 1999.

Appendix Q

DAILY HAUL RECORD

DAILY REPORT					
Anderson County Transportation Shop:_____				DATE OF REPORT:	
Truck No.		Location of Work	Local Collection Site Trips	Landfill Trips	Weight Total Tons
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
		DAILY TOTALS			

******** D – R – A – F- T C – O – P – Y *********

LOAD TICKET

B. LOAD TICKET		
TICKET NUMBER:		
CONTRACT NUMBER		
CONTRACTOR		
DATE:		
DEBRIS QUANTITY		
Truck No:	**Capacity (CY):**	
Load Size (CY):	**Tons:**	
Truck Driver:		
DEBRIS CLASSIFICATION		
	Burnable	
	Non-Burnable	
	Mixed	
	Other	
LOCATION		
Section/Area:	**Dumpsite**	
	Time	**Inspector**
Loading		
Dumping		
Eligibility (Y/N):	Original: [County] [City] [State] Yellow: Contractor Pink: Driver Gold: FEMA	

Appendix R

Municipality Public Works Point of Contacts

City of Belton
Scott Hanks, Public Works Director
Phone: (864) 338-7495
Belton City Hall
306 Anderson Street
Belton, SC 29627
864-338-7773
864-338-8369 (fax)

Town of Pendleton
Richard Bork, Public Works Director
600 East Queen street
Pendleton, SC 29670
864-646-9073

City of Anderson
Ronnie Aderhold/Don Chamblee
Director of Public Works
1100 Southwood Street
Anderson, SC 29624
(864) 231-2293

SC Department of Transportation
Fritz Wevvers, Road Engineer
Hwy 178 North
Anderson, SC
864-260-3300

Appendix S

Public Information Office Media Contacts

Public Information Office Media Contacts

Media	POC	Phone	Fax	E-mail
Anderson Journal	**Anna Mitchell**	**864-356-8183**	**864-679-1276**	**abrutzman@andersonjournal.com**
	Eva Prado			eprado@andersonjournal.com
Anderson Independent	**John Staed**	**864-224-432**	**864-260-1276**	newsroom@independentmail.com
	Stephanie Tracy	**864-260-1340**		tracysk@independentmail.com
Greenville News	**Marion Elliot**	**864-298-4290**	**864-295-3440**	melliot@greenvillenews.com
				localnews@greenvillenews.com
Television				
WYFF Anderson	**Keisha Foster**	**864-225-5500**	**864-225-4491**	Kfoster@hearst.com
Radio				
WRIX	Bill Bridges	864-224-6733	864-224-0260	jwwoodson@carol.net
Free Lance				
Paul Brown		864-224-5321	864-224-3694	pb@paulbrowncc.com

Appendix T

Pre-scripted information for public dissimilation

MEDIA RELEASE

Date:

Point of Contact: Anderson County Public Information Officer
864-260-4646
864-260-1055 (fax)
pio@andersoncountysc.org

This news release is designed to inform the general public and to place emphasis on actions the public can perform to expedite the cleanup process by separating burnable and non-burnable debris, segregating household hazardous waste; placing debris at the curbside; keeping debris piles away from fire hydrants and valves, reporting locations of illegal dump sites or incidents of illegal dumping and segregating recyclable materials.

Questions or comments concerning storm debris cleanup efforts should be directed to the County Emergency Services Department at 260-4646.

XXXXXXXXXXXXXXXXXXXXXXX-E-N-D-XXXXXXXXXXXXXXXXXXX

Appendix T

Continued

Pre-scripted information for public dissimilation

MEDIA RELEASE

Date:

Point of Contact: Anderson County Public Information Officer
864-260-4646
864-260-1055 (fax)
pio@andersoncountysc.org

This news release is designed to inform the general public of debris pick-up schedules, disposal methods and ongoing actions to comply with State and Federal Environmental Protection Agency (EPA) regulations, disposal procedures for self-help and independent contractors, and restrictions and penalties for creating illegal dumps.

Questions or comments concerning storm debris cleanup efforts should be directed to the County Emergency Services Department at 260-4646.

XXXXXXXXXXXXXXXXXXXXXX-E-N-D-XXXXXXXXXXXX

Appendix U

Grinding Company Vendor Point of Contact

***Anderson County would bring in a grinding operation if deemed necessary due to large quantities of stumps, leaves and limbs. Grinding operations will be done at the Starr C&D Landfill. We have contacted 2 companies for such an event.**

A.C.E. Environmental Inc.
508 Cherokee Rd.
Pelzer, SC 29669-9183
864-947-8100
Contact: Mike and Vickie Phillips

S R Grading, Inc.
1710 Hood Road
Greer, SC 29650
864-877-0154
Contact: Chuck Harvey

Hensons Inc.
Simpsonville, SC
828-859-5836
Contact: Ellis Fincher

Appendix V

Weight Scales Service Company & Alternate Weight Scales

Scales

Name of Company:
Address:
Contact person:
Telephone:
Other information:

fertilizer company

Name of Company:
Address:
Contact person:
Telephone:
Other information:

Appendix W

SC Department of Health & Environmental Control POC

SC Department of Health and Environmental Control
http://www.scdhec.net/environment/admin/htm/permtype.htm
Environmental Permitting
Solid Waste Landfills
General Permit for Land-Clearing Debris: John McCain, (803) 896-4067
C & D: John McCain, (803) 896-4067
Municipal Solid Waste: John Schnabel, (803) 896-4216
Solid Waste Transfer Station: Terry Davenport, (803) 896-4219
Yard Trash (Composting & Chip/Shred): Johnny Schnabel, (803) 896-4216

Appendix X

Pre-qualified Contractors (haulers)

Asplundh Environmental Services, Inc.
Paul Tucker, P.E.
Asplundh Environmental Services, Inc.
Contracts Manager
251.928.4500
www.asplundhenvironmental.com

Coxwell Disaster Recovery Services
Katja Palmer (904) 786-1120 ext 147 (904) 868-0990 (cell)

R. Chip Patterson, Director
Coxwell Disaster Services
J.B. Coxwell Contracting, Inc.
6741 Lloyd Road West
Jacksonville, Florida 32254
904.786.1120 (office);
904.783.2970 (fax)

Coxwell Disaster Recovery

A complete line of bonding, including **Bid Bonds and Payment and Performance Bonds**, is available to **JBCCI** for the variety of projects undertaken. **Current bonding capacity allows for $250 million on any single coverage, with a maximum aggregate of $950 million.** Maximum liability and equipment insurance is kept in force at all times, and job-specific insurance is obtained as needed to meet individual project requirements.

Our broad range of predominately **Caterpillar heavy equipment** and other construction vehicles (over 250 pieces) are well maintained through the utilization of a **structured maintenance and replacement policy**. Coupling this with specific personnel training ensures that projects are performed with new or updated equipment operated by experienced personnel. **In addition, the availability of open lines of credit with the Ring Power Corporation allow for the immediate purchase or rental of project specific equipment on an as-needed basis.**

Today, as in the past, **JBCCI** is a very **stable and financially responsible** corporation. Our finances and available lines of credit allow for **immediate payment to subcontractors** for completed work without necessarily waiting on its payment from the Owner. This practice allows for a **stable workforce** and **consistent, progressive construction activity** which is beneficial to the owner and the entire project team.

Balfour Beatty may contact the following references regarding the financial stability of J. B. Coxwell Contracting, Inc. Additional references are available upon request.

1. Ring Power Corporation
500 World Commerce Parkway
St. Augustine, FL 32095
(904) 737-7730 Office
(904) 448-4021 Fax
Account Number: 010322
Account Contact: Mr. Steve Dempsey

2. Standard Precast Corporation
12300 Presidents Court
Suite 1
Jacksonville, FL 32220
(904) 268-0466 Office
(904) 268-4403 Fax
Account Number: COX001
Account Contact: Mr. Russell Smith
or Ms. Joy Hamilton

3. National Waterworks, Inc.
11310 Distribution Avenue
Jacksonville, FL 32254
(904) 260-4566 Office
(904) 260-4722 Fax
Account Number: 122828
Account Contact: Mr. Carl Barton

4. Donna Hamilton, Inc.
4196 Herschel Street,
Jacksonville, FL 32210
(904) 786-5652 Office
(904) 783-0876 Fax
Account Number: JBCCI
Account Contact: Ms. Donna Hamilton

AES Capabilities Statement

Asplundh Environmental Services, Inc.

Since Asplundh Environmental Services, Inc. (AES) is an internal organization of the Asplundh Tree Expert Company, Inc. (ATE), AES can use the resources of other Asplundh organizations to meet the needs of our clients. This ensures no duplication of equipment and personnel and maximizes the efficient use of all Asplundh resources, and has allowed Asplundh to become the most efficient provider of services in each of its core markets. The corporate staff provides support to the vast Asplundh family of companies that support the nation's utility infrastructure on a daily basis, and for decades has been responding to natural disasters through out the nation. AES has been very successful adapting that system of corporate support to assist it in providing world class support to its government clients. AES has access to all Asplundh support staff, personnel and equipment to accomplish its mission taskings for the governing entity, and has successfully deployed hundreds of Asplundh resources from throughout the USA to projects across the country.

Financial Resources

ATE is a multi-billion dollar company and provides all funding to AES for its contracts and operations. Additionally, AES has an established bond program in place with *Travelers Casualty and Surety Company of America* with an aggregate limit of $300 million for payment and performance bonds. These vast financial resources have given AES the ability to commit resources at a moment's notice for every client, and AES has had the ability to finance its operations in support of any recovery operations without difficulty.

Personnel Resources and Availability

Asplundh's crews are well trained to work in hazardous situations. Our crews work near energized wires every day, making safety a top priority for all Asplundh people, at all times. To get the job done properly, Asplundh crews are provided with well-designed equipment, tools and safety gear. Whatever it takes to clear trees and remove debris, AES crews and their supervisors are ready to serve you at any hour of the day or night. We are dedicated to assisting the government to return the community to normal operations as soon as possible.

Asplundh has:

- over 26,000 corporate employees operating everyday throughout the USA;
- senior regional managers from over 90 regions and 26 separate companies for deployment in response to a disaster recovery tasking;
- an intensive training program for new employees; a standard-setting safety program;
- Personal Qualification Standards as part of the Training Certification Program Material required to be completed prior to new employees being assigned to any hazardous working conditions;
- a Substance Abuse Policy;

Outstanding Equipment Resources

With over 32,000 individual pieces of equipment, Asplundh is well equipped for any debris management program you may need. In addition to our standard lifts, chippers, split dumps and hydraulic tools, some of the specialized equipment includes:

- thousands of pieces of hauling equipment of various types and sizes;
- grinders, chippers, burners, and mowers;
- aerial lift trucks for tree trimming;
- all types of special-purpose equipment, including track-mounted aerial lifts of various heights for off-road rights-of-way.

This equipment is:

- kept in good operating condition and provided with all needed maintenance. All equipment meets DOT and industry specifications for safe and effective operations;

- properly registered and insured and in compliance with all federal, state and local safety regulations.

AES has mobilized thousands of pieces of debris clearing and removal equipment almost immediately in the event of a natural disaster. This includes Subcontractor-supplied as well as Asplundh-owned equipment.

Storm Coordination Expertise
Asplundh's Storm Center personnel, located at our National Headquarters in Willow Grove, Pennsylvania, monitor major storm systems and quickly notify key personnel in areas that may be affected. Often, before the client has even called, we have made preparations and have begun to mobilize to respond to the coming crisis. AES is able to use the ATE Storm Center Management Center to find and track all ATE personnel and equipment throughout the nation, and to coordinate their immediate mobilization to the site of the disaster. In addition, ATE maintains a large supply and services division, with constant contact with major suppliers of all commodities throughout the nation. ATE has been able to coordinate the immediate shipment of supplies and materials to AES at our job sites throughout the nation. This corporate support is unparalleled in the industry and provides AES with the backbone of experienced staff, communications, and capabilities to ensure the fastest delivery of personnel, equipment, services, and supplies to the client as possible. This system was established to help ATE assist the nation's utility systems to recover quickly, and has been easily adapted to allow AES to assist its clients.

Project Contract Management - Entering its fifth year of business, AES has shown itself to be a proven leader in the field of Disaster Debris Removal with the strength of leadership, resources and organization to handle multiple jobs of varying complexity in various locations with great success and to the satisfaction of the clients. This is evidenced by the fact that AES simultaneously ran 5 disposal sites in Miami-Dade County, Florida; 1 site in Hardin County, Texas; and up to 15 different sites in Louisiana in response to Hurricanes Katrina, Rita and Wilma.

Accounting - Financial accountability is maintained throughout the contract process using a system of checks and balances that ensures quality control of the documentation process and is tied directly to the quantitative documentation originated in the field by the Client Representative and Contractor personnel. To aid the Contractor in this effort, our Accounting Department uses several electronic accounting tools, to include *QuickBooks Pro-Financial Management Software* and *SMSTurbo* which is a document tracking and management software.

Licenses and Certifications – AES is a licensed General Contractor in Alabama, California, and Mississippi and has a certified Traffic Control Supervisor, Traffic Control Technician, and Flagger Instructor on staff.